Water Resources Data
Nebraska
Water Year 1984

COMPLETED

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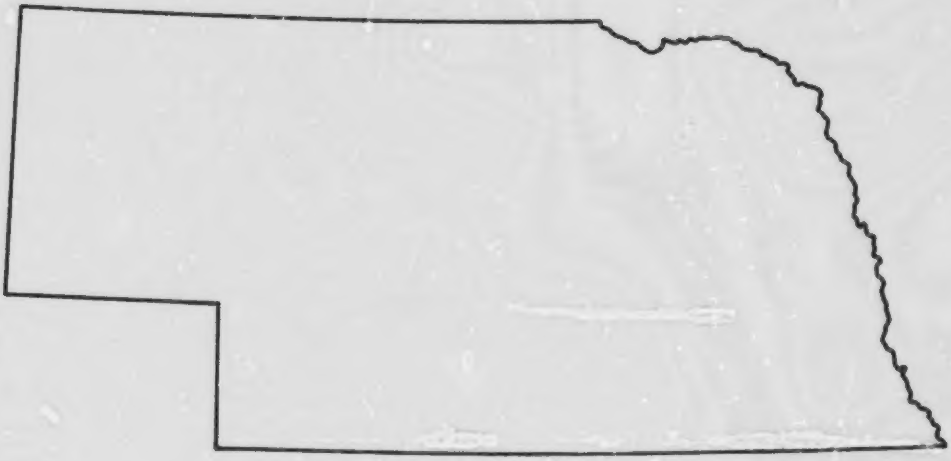

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NE-84-1
Prepared in cooperation with the Nebraska Department of Water Resources, the Conservation and Survey Division of the University of Nebraska, the Nebraska Department of Environmental Control, and with other State and Federal agencies

CALENDAR FOR WATER YEAR 1984

1983

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U.S. DEPARTMENT OF THE INTERIOR
March 3, 1849

March 1st 1867

Water Resources Data Nebraska Water Year 1984

by G.B. Engel, R.A. Engberg, and M.J. Ellis

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NE-84-1

Prepared in Cooperation with the Nebraska Department of Water Resources, the Conservation and Survey Division of the University of Nebraska, the Nebraska Department of Environmental Control, and with other State and Federal agencies

I

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UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information of the water program in Nebraska, write to:

District Chief
Water Resources Division
U.S. Geological Survey
406 Federal Building
100 Centennial Mall, North
Lincoln, Nebraska 68508

1985

PREFACE

This annual hydrologic data report of Nebraska is one of a series of annual reports that documents hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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Water resources data for the 1984 water year for Nebraska consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality in wells. This report contains discharge records for 159 streamflow gaging stations, 15 partial-record or miscellaneous streamflow stations, and 5 crest-stage, partial-record streamflow stations; stage and content records for 10 lakes and reservoirs; water-quality records for 43 streamflow stations, 16 ungaged streamsites, and 161 wells; and water-level records for 58 observation wells. These data represent that part of the National Water-Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Nebraska.

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*Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses

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*Nebraska

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WATER RESOURCES DATA - NEBRASKA, 1984

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Nebraska each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Nebraska."

This report includes records on both surface and ground water in the State. Specifically, it contains: (1) Discharge records for 159 streamflow-gaging stations, for 15 partial-record or miscellaneous streamflow stations, and for 5 crest-stage, partial-record streamflow stations; (2) stage and content records for 10 lakes and reservoirs; (3) water-quality records for 43 streamflow-gaging stations, for 16 ungaged streamsites, and for 161 wells; and (4) water-level records for 58 observation wells. Records included for stream stages and for ground-water levels are only a small fraction of those obtained during the water year.

This series of annual reports for Nebraska began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Nebraska were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 6A and 6B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NE-84-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on back of title page or by telephone (402) 471-5082.

Cooperation

The U.S. Geological Survey and agencies of the State of Nebraska have had cooperative agreements for the collection of water-resource records since 1930. Organizations that assisted in collecting the data in this report through cooperative agreement with the Survey are: Nebraska Department of Water Resources, J. Michael Jess, Director; Conservation and Survey Division, University of Nebraska-Lincoln, Vincent H. Dreeszen, Director; Nebraska Department of Environmental Control, Dennis Grams, Director; Big Blue River Compact Administration; Central Platte Natural Resources District; Little Blue Natural Resources District; and City of Lincoln.

Nebraska Department of Water Resources (NDWR) personnel in Bridgeport, Cambridge, Lincoln, Norfolk, and Ord contributed significantly in the collection and computation of records under a USGS-NDWR cooperative agreement.

Assistance with funds or services was given by the U.S. Army Corps of Engineers in collecting records for 23 streamflow-gaging stations and 5 crest-stage gages; and by the U.S. Bureau of Reclamation in collecting records for 4 streamflow-gaging stations, 2 lake stations, and in providing elevations or capacity tables for 8 reservoir stations.

The following organizations aided in collecting records: Central Nebraska Public Power and Irrigation District, Nebraska Public Power District, and Loup River Public Power District.

OVERVIEW OF 1984 WATER YEAR

Precipitation data from published reports of the National Weather Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, for the eight National Weather Service Divisions in Nebraska are shown in table 1. Precipitation and departures from normal are shown for the first 9 months of the water year and then for the remaining 3 months, in order to emphasize the precipitation distribution during the year. Also shown are the precipitation and departures from normal for the entire 1984 water year.

All divisions had greater-than-normal precipitation during the first 9 months of the water year. Precipitation was greater than 150 percent of normal in 4 divisions (Northeast, Central, East-Central, and Southeast). All divisions had less-than-normal precipitation during the last 3 months of the water year, the extreme being the South-Central, which had only 31 percent of normal precipitation. Two divisions, the Panhandle and South-Central, had less-than-normal precipitation during the water year. Percentage of normal precipitation is shown in figure 1 for the eight divisions.

Table 1.--Precipitation and departures from normal, in inches

National Weather Service Division	October - June		July - September		1984 water year October-September	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
Panhandle	11.69	0.36	4.20	-1.08	15.89	-0.72
North-Central	17.08	3.51	6.85	-.40	23.93	3.11
Northeast	30.41	13.79	4.78	-3.91	35.19	9.88
Central	25.63	10.63	3.78	-4.30	29.41	6.33
East-Central	30.78	12.48	4.63	-5.31	35.41	7.17
Southwest	16.69	4.51	2.96	-3.73	19.65	.78
South-Central	20.42	5.34	2.66	-5.89	23.08	-.55
Southeast	29.69	10.57	5.61	-5.57	35.30	5.00

Streamflow

Monthly mean discharges during the 1984 water year at representative stations are plotted against the long-term monthly means in figure 1. The period of record used for the long-term mean at some stations is from the completion of the last known storage structure or from the latest change in streamflow regulation upstream from the gage. At the start of the 1984 water year, streamflow was about equal to the long-term mean at most stations. Individual graphs demonstrate the varied conditions in the State during the year.

The graphs for stations 06454500, Niobrara River above Box Butte Reservoir, and 06841000, Medicine Creek above Harry Strunk Lake, indicate that streamflow followed the general trend of the mean flow but remained less than normal throughout much of the first 9 months of the water year. Precipitation was only slightly greater than normal during this period in western and southwestern Nebraska and did not produce much runoff to the streams. Also, ground-water levels had declined during the very dry late summer and fall of 1983, so there was less ground-water contribution to the streamflow. The streamflow decreased markedly during the last 3 months of the water year and was less than the long-term mean at year's end.

The graph for station 06461500, Niobrara River near Sparks, indicates the greater-than-normal runoff in January and February produced by melting snow that had accumulated mainly in November. This earlier-than-normal snowmelt runoff also is indicated on graphs for stations 06785000, Middle Loup River at St. Paul, and 06800500, Elkhorn River at Waterloo. Precipitation was less than normal in the North-Central Division during most of May to September, although not as severe as other areas of the State. Streamflow decreased and was less than the long-term mean for this part of the year.

The graphs for stations 06785000, Middle Loup River at St. Paul; 06800500, Elkhorn River at Waterloo; and 06815000, Big Nemaha River at Falls City, indicate the extremely wet conditions during April and June. The Middle Loup River at St. Paul is characteristic of streams originating in the Sand Hills Region of Nebraska, where ground-water inflow is the principal source of streamflow. Streamflow is quite uniform, and extremes in runoff are not great. However, three distinct high-runoff periods are indicated in the graph of the 1984 mean flows. Runoff during June was almost three times the mean June flow. The annual flow was the greatest for the period of record at this site.

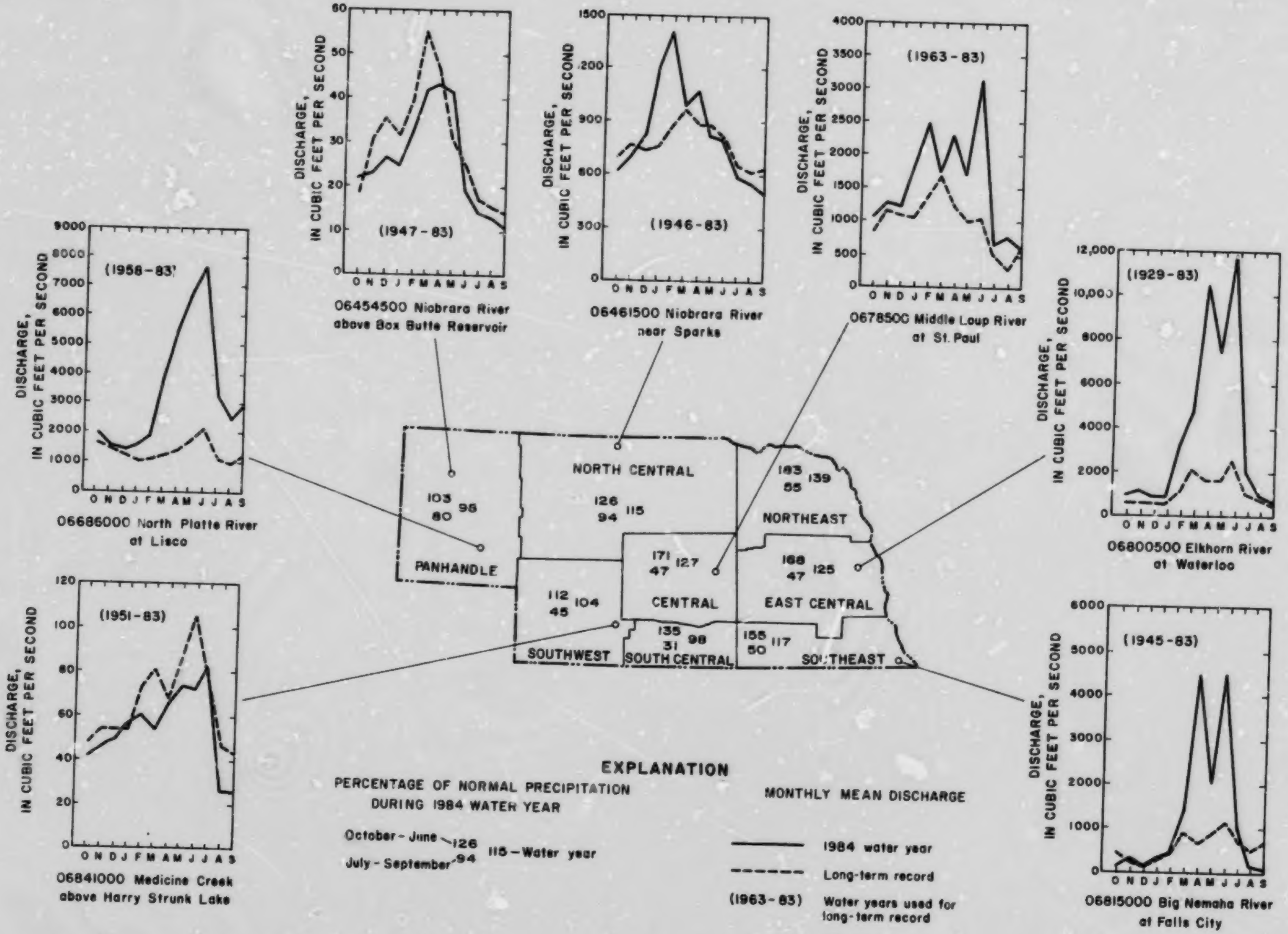

Figure 1.--Comparison of 1984 water-year precipitation and streamflow to long-term means.

Station 06800500, Elkhorn River at Waterloo, which is representative of both the Northeast and East-Central Divisions, had the highest mean flow for the period of record for all 3 months--April, May, and June--and also the highest annual mean flow for the period of record. Station 06815000, Big Nemaha River at Falls City, had the highest April mean flow and the third highest annual mean flow for the period of record. Flows decreased substantially after June, as rainfall in the eastern part of the State was only about 50 percent of normal during the last 3 months of the water year. Flow at Big Nemaha River at Falls City, which has very little ground-water contribution, decreased to only 18 percent of the long-term mean for September.

The runoff at station 06686000, North Platte River at Lisco, is determined more by releases from upstream reservoirs in Wyoming and diversions for irrigation than by precipitation patterns. Releases were increased substantially starting in March to provide storage space in anticipation of the mountain snowmelt. Releases increased until the snowmelt peak had passed in June; then they were decreased, although kept greater than average in order to lower reservoir levels.

Peak discharges at North Platte River stations upstream from Lake McConaughy were greater than the 1983 water year peaks, but were substantially less than record maximums. Total runoff volume, however, was the maximum since records began at all North Platte River stations, including those downstream from Lake McConaughy, exceeding the maximums that had just occurred in 1983. Comparison of the 1984 water-year peak discharges and runoff with those for the 1983 water year and with means for the period of record is shown in table 2. Runoff in the South Platte River basin was considerably less than that during the 1983 water year; therefore, peak flows and runoff volumes at Platte River stations downstream from the confluence of the North and South Platte Rivers were less than the 1983 water year flows, which generally were maximums for the period of record.

Table 2. Comparison of 1984 water-year peak discharge and runoff with 1983 water-year peak discharge and runoff and with mean runoff for North Platte River stations

[Ft^3/s = cubic feet per second]

North Platte River Station identification		1984 water year			1983 water year			Mean water-year runoff	
		Peak discharge		Runoff[1] (thousand acre-feet)	Peak discharge		Runoff[2] (thousand acre-feet)	Thousand acre-feet	Period used (water years)
		Ft^3/s	Date		Ft^3/s	Date			
06679500	at Mitchell	8,920	6-15-84	2,184	8,500	6-27-83	2,014	559.3	1958-83
06682000	near Minatare	9,820	6-19-84	2,293	8,750	6-27-83	2,210	736.1	1958-83
06684500	at Bridgeport	9,620	6-20-84	2,467	8,690	6-28-83	2,245	944.7	1958-83
06686000	at Lisco	8,880	6-18-84	2,470	8,700	6-29-83	2,277	1,006	1958-83
06687500	at Lewellen	9,770	6-19-84	2,603	8,480	6-30-83	2,359	1,077	1958-83
06690500	near Keystone	6,390	5-25-84	1,570	9,470	8-10-83	1,443	352.8	1943-83
06691000	near Sutherland	5,720	4-02-84	1,598	6,540	8-23-83	1,427	355.7	1943-83
06693000	at North Platte	6,220	4-22-84	1,791	7,800	8-23-83	1,638	531.8	1943-83

[1] New maximums for period of record.

[2] Previous maximums for period of record.

Thunderstorms occurred on June 11-13 throughout much of eastern Nebraska. Widespread rains had occurred throughout much of the same area throughout the first days of June, so that the soils already were saturated. Runoff was substantial and peak flows reached new maximums or near maximum at many gaging stations, particularly in the Salt Creek, Big Blue River, and Little Blue River basins. Intense rainstorms occurred again on June 15-16, this time in northeastern Nebraska. New maximum peak flows were recorded on tributaries to the Elkhorn River and significant rises occurred in the downstream reach of the Elkhorn River from West Point to the mouth. Peak discharges during the 1984 water year and for the period of record for selected gaging stations are shown in table 3.

Table 3.--Peak discharges for the 1984 water year and for the period of record at selected gaging stations

[mi² = square miles; ft³/s = cubic feet per second]

Station identification		Drainage area (mi²)	Period of record (water years)	Peak discharge period of record		Peak discharge 1984 water year		Remarks on 1984 peak
				ft³/s	Date	ft³/s	Date	
06478518	Bow Creek near St. James	304	1979-84	13,200	6-27-83	21,400	6-17	New maximum.
06784000	South Loup River at St. Michael	2,350	1944-84	50,000	6-22-47	11,800	6-13	Fifth highest.
06785000	Middle Loup River at St. Paul	8,090	1895-99, 1903, 1929-84	72,000	6-23-47	29,100	6-12	Second highest.
06793000	Loup River near Genoa	14,400	1929-32, 1944-84	129,000	8-13-66	44,700	6-13	Fourth highest.
06796000	Platte River at North Bend	77,100	1929-84	112,000	3-29-60	65,200	6-13	Fifth highest.
06799230	Union Creek at Madison	174	1979-84	5,540	5-19-82	7,630	6-17	New maximum.
06799350	Elkhorn River at West Point	5,100	1961-84	33,000	6-25-69	24,300	6-18	Fifth highest.
06799385	Pebble Creek at Scribner	204	1979-84	7,880	10-9-82	20,300	6-16	New maximum.
06800000	Maple Creek at Nickerson	450	1952-84	10,800	6-21-60	6,430	6-17	Fifth highest.
06800500	Elkhorn River at Waterloo	6,900	1899-1903, 1911-15, 1929-84	100,000	6-12-44	43,100	6-18	Fourth highest.
06803500	Salt Creek at at Lincoln	684	1950-84	28,200	6-02-51	15,600	6-13	Third highest since 1968--Branched Oak Dam.
06803510	Little Salt Creek near Lincoln	43.6	1969-84	6,520	6-15-82	7,500	6-12	New maximum.
06803520	Stevens Creek near Lincoln	47.8	1969-84	3,820	6-15-82	4,620	6-13	New maximum.
06803530	Rock Creek near Ceresco	119	1970-84	10,800	6-15-82	5,230	6-12	Third highest.
06804000	Salt Creek at Greenwood	1,051	1952-84	41,000	6-24 63	46,800	6-13	New maximum.
06805500	Platte River at Louisville	85,800	1953-84	124,000	3-30-60	144,000	6-14	New maximum.
06806500	Weeping Water Creek at Union	241	1950-84	60,300	5-09-50	53,500	6-13	Second highest.
06881200	Turkey Creek near Wilber	460	1960-84	7,300	3-28-60	33,000	6-13	New maximum.
06881500	Big Blue River at Beatrice	3,900	1902-84	49,100	10-12-73	55,100	6-14	New maximum.
06882000	Big Blue River near Barneston	4,447	1932-84	57,700	6-09-41	55,800	6-14	Second highest.
06883940	Big Sandy Creek at Alexandria	607	1980-84	10,200	9-29-83	21,900	6-13	New maximum.
06884000	Little Blue River near Fairbury	2,350	1908-15, 1929-84	37,800	10-12-73	41,900	6-13	New maximum.
06884025	Little Blue River near Hollenberg, Kans.	2,752	1975-84	17,200	3-15-78	36,600	6-13	New maximum.

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Chemical Quality of Streamflow

To determine whether significant changes are occurring in the chemical quality of streamflow leaving Nebraska, an analysis was made of specific-conductance records from sampling stations on five streams. Each station is located at or near the point at which the stream leaves Nebraska.

Specific conductance can be used to approximate the dissolved-solids concentration in water because it is related to the concentrations and types of ions in water. To determine whether significant differences in specific conductance occurred between the 1984 water year and the period of record, a statistical technique called the t-test was used.

The t-test technique requires proving or disproving a hypothesis that the mean specific conductance for the 1984 water year is equal to the mean for the period of record. The procedure for doing this requires computing a "t" statistic and comparing it to a value taken from Student's "t" table. If the absolute value of the computed "t" value (t_c) is less than the tabular "t" value (t_{tab}), the hypothesis that the means are equal is accepted. If the absolute value of t_c is greater than t_{tab}, the hypothesis is rejected and the means are considered to be not equal. In terms of specific conductance, a rejection of the hypothesis indicates there is a difference in water quality at a particular site between the 1984 water year and the period of record. A 95-percent level of significance ($\alpha = 0.05$) was used for each t-test, and it was assumed that the data were normally distributed.

Results of the t-tests for the five stations are given in table 4. For three of the stations, 06805500 Platte River at Louisville, 06815000 Big Nemaha River at Falls City, and 06884025 Little Blue River at Hollenburg, comparisons of means for the 1984 water year to those for the period of record indicate that the means are not statistically different.

The mean specific conductance for the 1984 water year for station 06465500, Niobrara River near Verdel, was significantly greater than the mean specific conductance for the period of record. Regression relationships between specific conductance and water discharge given in U.S. Geological Survey Water Supply Paper 2179, "A statistical analysis of the quality of surface water in Nebraska," by R. A. Engberg, indicate that a significant positive relationship exists between water discharge and specific conductance at this station. For the 1984 water year, mean water discharge at the station exceeded the 23-year mean by 37 percent. It follows, therefore, that the mean specific conductance for the 1984 water year would exceed, notably, the mean specific conductance for the period of record.

In contrast, streamflow during the 1984 water year was nearly 5 percent less than the 30-year average at station 06853000, Republican River near Guide Rock. Regression relationships given in Water Supply Paper 2179 indicate that at this station, specific conductance tends to increase with decreasing streamflow. For the 1984 water year, mean specific conductance at the Guide Rock station is, indeed, notably greater than the mean specific conductance for the period of record. When streamflow is less than the mean for a period, this generally indicates that a greater percentage of streamflow is derived from ground-water seepage than from overland runoff. For the Republican River drainage area above the Guide Rock station, ground water generally is more mineralized than water derived from overland runoff. This accounts for the inverse relationship between specific conductance and water discharge.

Table 4.--Results of t-tests comparing mean specific conductance for the 1984 water year with mean for the period of record for streamflow leaving Nebraska
[Specific conductance, in micromhos per centimeter at 25°C; R = rejected; A = accepted]

Station identification	Specific conductance						t-test			
	1984 water year			Period of record						
	Number of values	Mean	Standard deviation	Number of values	Mean	Standard deviation	Period used (water year)	t_{tab}	t_c	Hypothesis
06465500 Niobrara River near Verdel	11	307	53	127	267	28	1967-83	± 2.20	2.47	R
06805500 Platte River at Louisville	12	721	58	107	687	212	1972-83	± 2.00	1.28	A
06815000 Big Nemaha River at Falls City	12	613	154	130	635	163	1973-83	± 2.14	-.47	A
06853000 Republican River near Guide Rock	12	675	138	301	576	102	1962-83	± 2.18	2.51	R
06884025 Little Blue River at Hollenberg	12	453	146	148	473	171	1972-83	± 2.14	-.45	A

Ground-Water Levels

Water-level changes that occurred during the 1984 water year were determined from a statewide network of observation wells measured by 33 Federal, State, and local agencies. The network consists of more than 3,500 wells measured annually, semiannually, or monthly and 68 wells equipped with continuous recorders. Because of the importance of ground water as a source for irrigation and municipal supplies, most of the observation wells in Nebraska are located in those areas where large quantities of ground water are pumped. Water-level fluctuations in representative observation wells, located in different parts of the State, are shown in figure 2.

Probably the most significant changes in ground-water levels during the 1984 water year were the marked water-level rises that occurred in the central, east-central, and northeastern parts of the State. These water-level rises are a continuation of the rises that started in the 1983 water year. The rising water levels probably have been caused by the greater-than-normal precipitation that occurred in these parts of the State during the past 2 years. Hydrographs for observation wells in Buffalo, Holt, and Seward Counties were selected as representative examples of the water-level fluctuations that have occurred in these parts of the State during the 1983 and 1984 water years.

The hydrograph for the observation well in Buffalo County shows that water levels have risen slightly more than 4 feet during the 1983 and 1984 water years. During the past 30 years, water levels have been higher than those for the 1984 water year only 3 times (1969, 1970, and 1974 water years). At the end of the 1984 water year, levels in the well were almost 3 feet higher than they were at the end of the 1983 water year.

Water levels in the Holt County observation well were higher than any that have occurred in that well during the past 18 years. Water levels in the well at the end of the 1984 water year were 2.45 feet higher than they were at the end of the 1983 water year.

In the Seward County observation well, water levels were higher during the 1984 water year than any levels recorded during the past 11 years. At the end of the 1984 water year, the water level was 2.44 feet higher than at the end of the 1983 water year.

In the south-central, southwestern, and panhandle parts of the State, where precipitation during the water year was about normal or slightly less than normal, water levels generally declined during the 1984 water year. During the fall and winter months, water levels generally did not rise as high as the previous year, and declines during the irrigation season generally were greater than they were during the 1983 water year. Most water levels at the end of the 1984 water year were less than 1 foot lower than they were at the end of the 1983 water year. An example of these water-level fluctuations is illustrated by the hydrograph for the Chase County observation well.

In those parts of Nebraska where ground water is used only for domestic and stock supplies, most water-level fluctuations are caused by variations in natural recharge to and natural discharge from the aquifers. Commonly, water levels rise during the fall and winter months when recharge from precipitation exceeds discharge by seepage to streams and by evapotranspiration; they decline during the spring and summer months when discharge by seepage to streams and by evapotranspiration is greater than recharge from precipitation. The hydrograph for the observation well in Blaine County shows these annual fluctuations.

EXPLANATION OF THE RECORDS

The records in this report are for the 1984 water year that began October 1, 1983, and ended September 30, 1984. A calendar of the water year is provided on the inside of the front cover. Records for a given station, whether water discharge or water quality, are presented together, so far as practicable, with those for water discharge presented first. Headings providing information on station locations, drainage areas, and other pertinent items are included for all records except those regarded as miscellaneous or partial.

Station Identification Numbers

All data stations, whether streamsite or well, in this report are assigned an identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and for surface-water stations where only miscellaneous measurements are made.

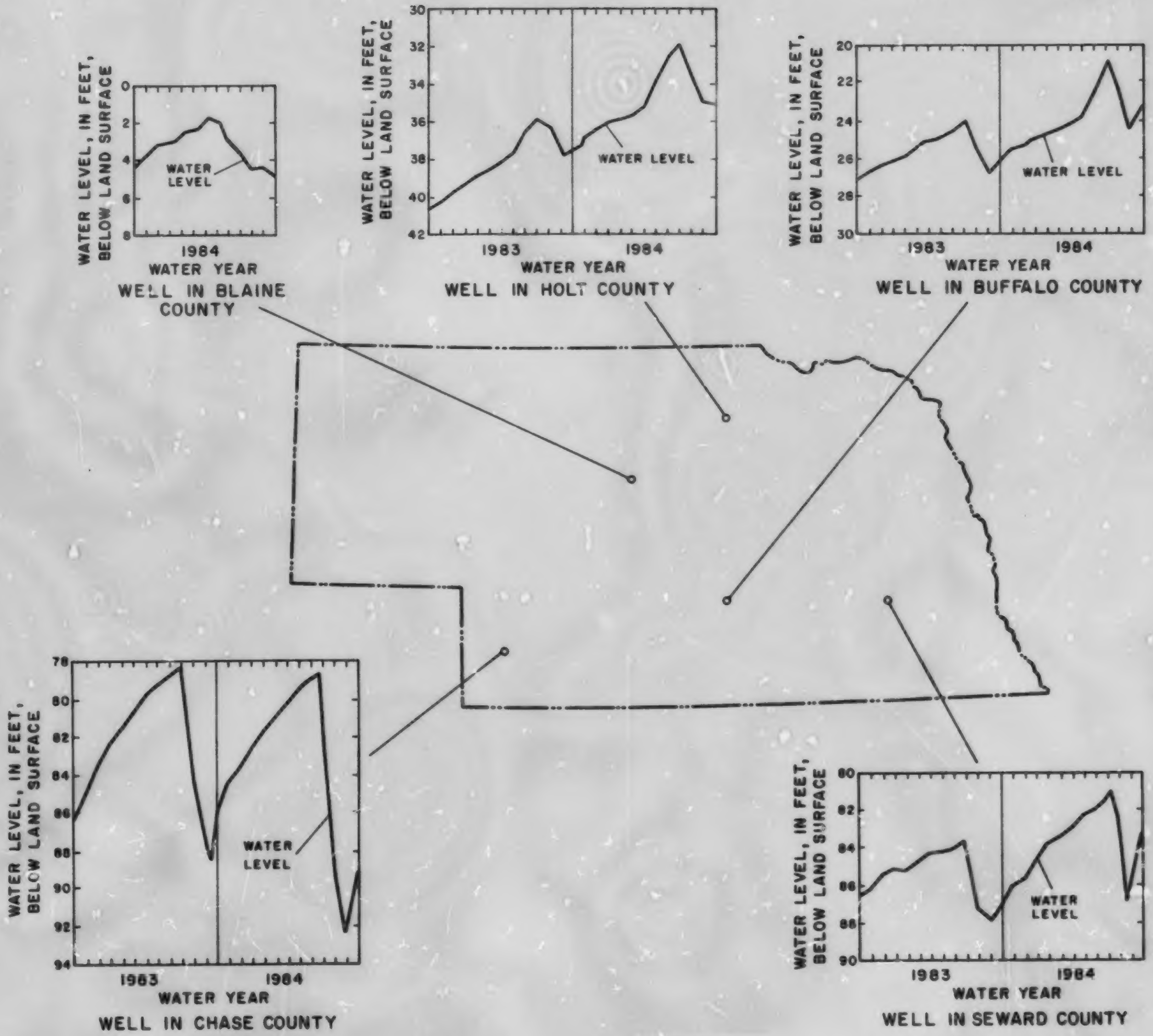


Figure 2.--Hydrographs of representative observation wells, 1983 and 1984 water years.

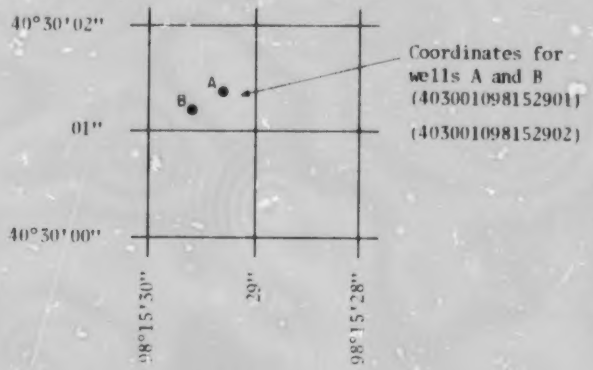
Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 06797000, which appears just to the left of the station name, includes the two-digit part number "06" plus the six-digit downstream-order number "797000." The part number designates the major river basin; for example, part "06" is the Missouri River basin.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and second of latitude; the next seven digits denote degrees, minutes, and seconds of longitude; and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. (See figure below.)



System for numbering wells and miscellaneous sites (latitude and longitude)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because mean daily discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Miscellaneous sites." Locations of all complete-record and crest-stage stations for which data are given in this report are shown on figure 3.

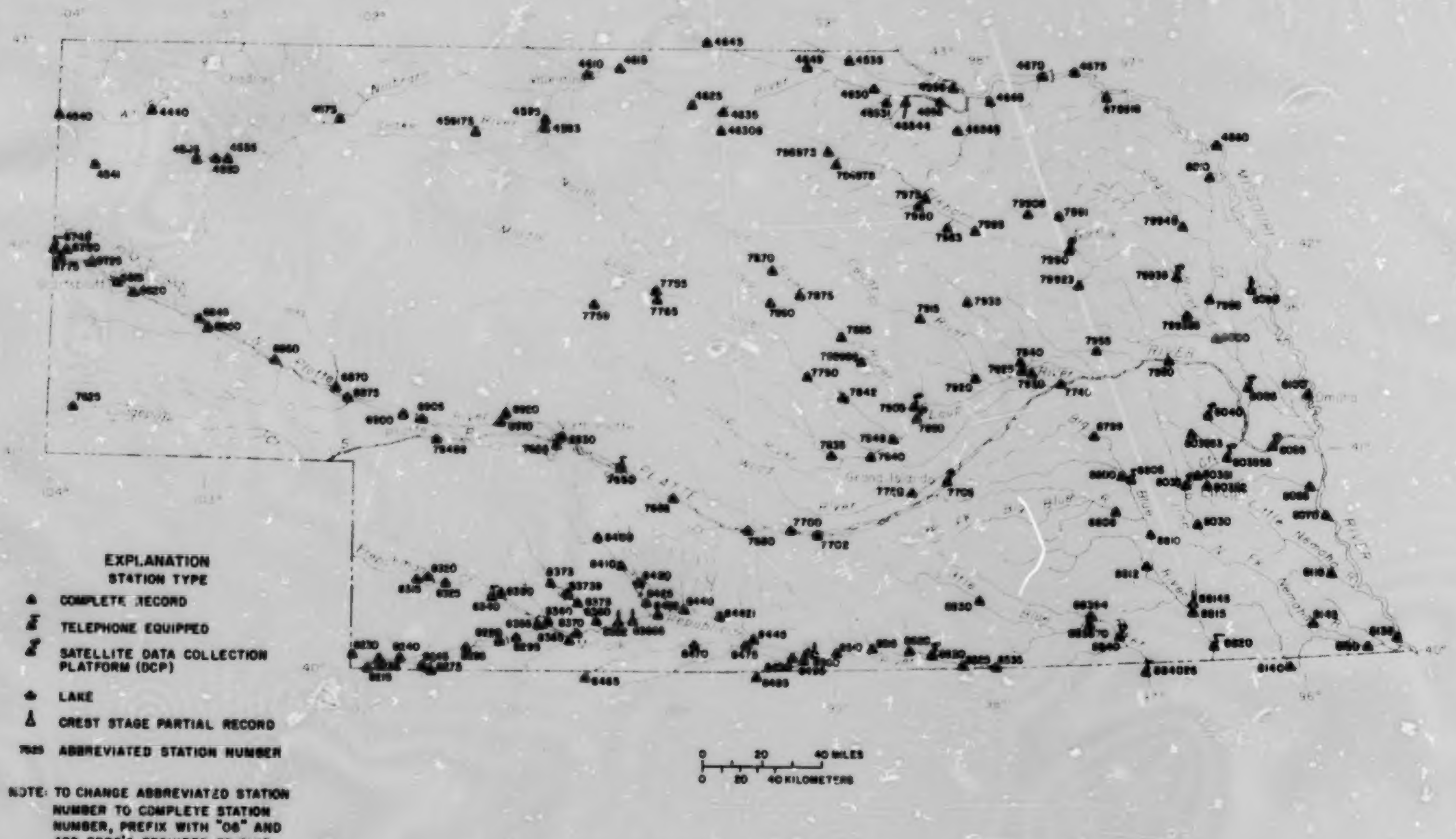

EXPLANATION
STATION TYPE
COMPLETE RECORD
TELEPHONE EQUIPPED
SATELLITE DATA COLLECTION PLATFORM (DCP)
LAKE
CREST STAGE PARTIAL RECORD
7625 ABBREVIATED STATION NUMBER
NOTE: TO CHANGE ABBREVIATED STATION NUMBER TO COMPLETE STATION NUMBER, PREFIX WITH "06" AND ADD ZERO'S REQUIRED TO GIVE EIGHT DIGITS.
0 20 40 MILES
0 20 40 KILOMETERS
Omaha
Grand Island
PLATTE
RIVER
MISSOURI
Republican

Figure 3.--Location of active surface-water gaging stations.

10

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationship between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information.

Data Presentation

Information is provided with each complete record of discharge or lake content. Comments to follow clarify information under the various headings.

LOCATION.--Information on locations is obtained from the most accurate maps available. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available vary from one drainage basin to another, the accuracy of drainage areas likewise vary. Also, updating of drainage areas is common as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be merged with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If no daily, monthly, or annual figures of discharge were revised, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--The remarks contain information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station, and possibly to other pertinent items.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record has accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is reliable information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the minimum daily discharge and was determined and is reported in the same manner as the maximum.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record. For stations meeting certain criteria, information relative to peak discharges and stages greater than a selected base discharge is presented under this heading. Whereas there can be only one peak discharge for the year, there is a peak discharge for each major rise of the stream. The discharge peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks and are important in many types of detailed hydrologic studies. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substatial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. Minimums for the current water year appear below the table of peak data.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

The data obtained at partial-record stations follow those for complete-record stations and are presented in three formats. The first presents maximum discharges for crest-stage partial-record stations, of which there are only a few. The second presents discharges measured at miscellaneous sites, that is, at sites other than complete gaging stations or crest-stage partial-record stations. The third presents discharges or indications of zero flow resulting from low-flow investigations. Some of the stations measured in the low-flow investigations are the same as those for which complete records or partial records are published.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated.

Other Records Available

Records of daily diversions of water from streams by canals are collected by and published in Hydrographic Reports of the Nebraska Department of Water Resources. Included are discharge records for streams and storage records for reservoirs not published in reports of the Geological Survey. Copies of the Hydrographic Reports may be obtained from the Nebraska Department of Water Resources, 301 Centennial Mall, South, P.O. Box 94676, Lincoln, NE 68509 (telephone number: 402-471-2363).

Records of discharge, not published by the Geological Survey, are collected in Nebraska at several sites by the U.S. Army Corps of Engineers. The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of these sites. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Nebraska District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies. Based on measurement frequencies, the records are considered to be continuing, partial, or miscellaneous. "Continuing records" are based on measurements made quarterly or more frequently, "partial records" are based on measurements made less than quarterly but systematically throughout a period of at least several years, and "miscellaneous records" are based on measurements made less than quarterly but not systematically.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 4.

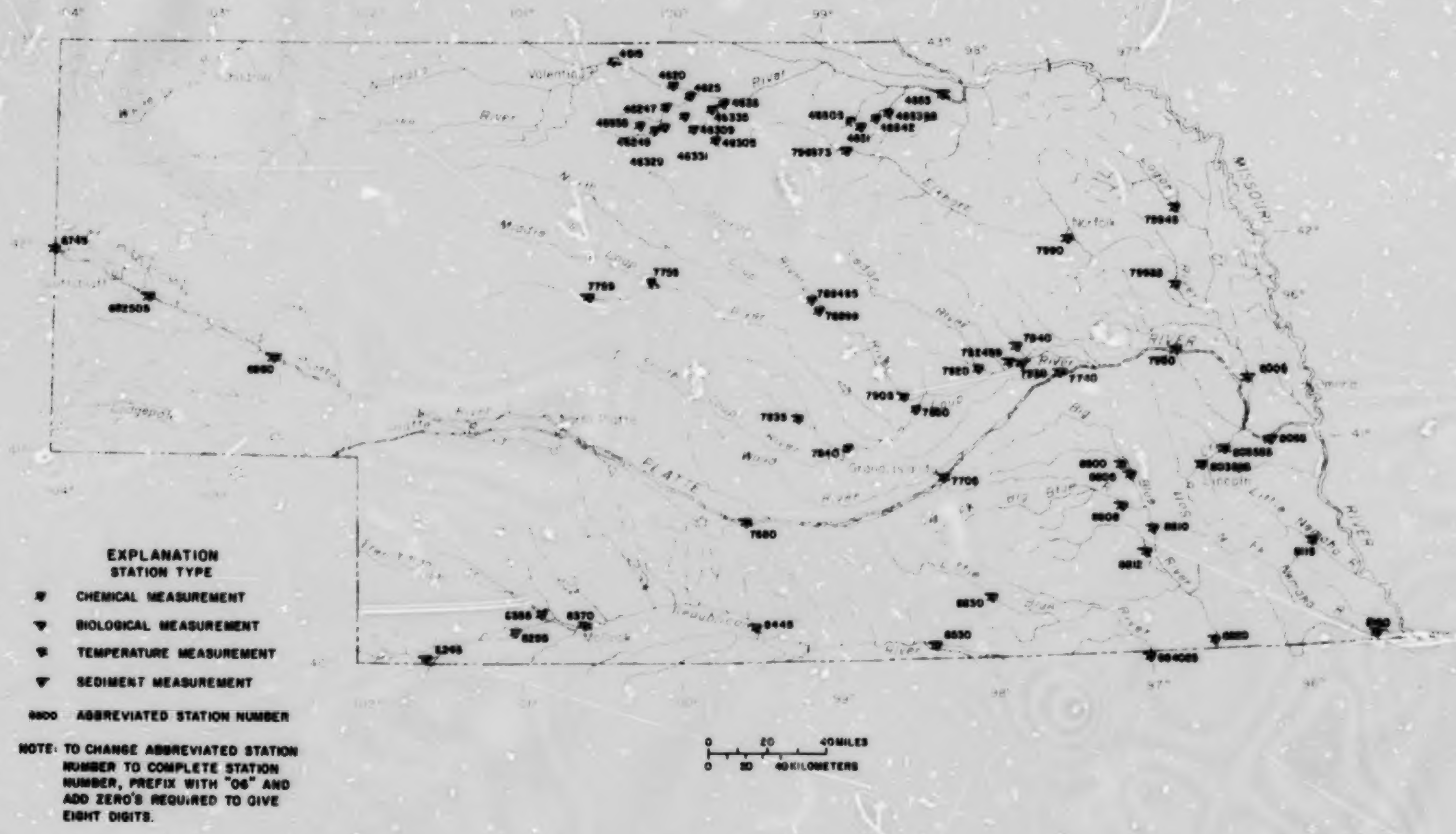

EXPLANATION
STATION TYPE
CHEMICAL MEASUREMENT
BIOLOGICAL MEASUREMENT
TEMPERATURE MEASUREMENT
SEDIMENT MEASUREMENT
6600 ABBREVIATED STATION NUMBER
NOTE: TO CHANGE ABBREVIATED STATION NUMBER TO COMPLETE STATION NUMBER, PREFIX WITH "06" AND ADD ZERO'S REQUIRED TO GIVE EIGHT DIGITS.
0 20 40 MILES
0 20 40 KILOMETERS
104°
103°
102°
101°
100°
99°
98°
97°
96°
43°
42°
41°
40°
Valentine
Norfolk
Grand Island
Lincoln
Omaha
Niobrara River
Snake River
Elkhorn River
Loup River
PLATTE RIVER
Republican River
Big Blue River
Little Blue River
MISSOURI RIVER
6745
682505
6860
7759
7755
7700
7750
7740
7800
7835
7940
7980
7990
8006
8050
8445
8530
8830
8810
8812
8815
6600
6620
6665
6625

Figure 4.--Location of active surface-water-quality stations.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the insitu water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed on p. 19 of this report. Also detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

To obtain representative data for a stream, one measurement or sample near the centroid of flow may be adequate if the solutes are mixed homogeneously throughout the stream cross section. If they are not, it is necessary to sample through several verticals across the stream and composite these samples. All samples obtained for the National Stream-Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the collector.

Suspended sediment in a stream commonly is not distributed uniformly throughout the stream cross section. To obtain suspended-sediment samples that are representative of the entire stream cross section, it is common practice to use depth-integrating samplers and to obtain the samples from a number of verticals across the stream. In Nebraska, the samples ordinarily are obtained using a method called the "equal transit rate method (ETR)," one in which the proportion of sediment obtained from each vertical is proportioned to the discharge in that vertical. (See Techniques of Water Resources Investigations, Book 3, Chap. C2, p. 54.)

Suspended-sediment samples obtained daily by local observers are taken from one or two verticals. Concentrations of sediment from observers' verticals are compared periodically with those from several verticals so that measurements from the daily samples may be adjusted to reflect more accurately the average concentrations for the entire stream cross section.

During periods in which water discharge and sediment concentrations may be changing rapidly, samples may be collected more frequently than daily. Published mean daily sediment concentrations for these periods may be computed by the subdivided-day method (see Techniques of Water Resources Investigations, Book 3, Chap. C3, p. 47).

At some stations, suspended-sediment samples are collected only periodically. Although data from periodic collections may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geolgical Survey laboratories in Arvada, Colo., or Doraville, Ga. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

Where water-quality records for a given station are presented in this report depends partly on the nature of the records and partly on the presence of associated records. If, for a given station, complete discharge records are published, the water-quality records are presented immediately following the discharge records for that station. If, however, complete discharge records are not published and the water-quality records are "continuing" in nature, the water-quality records appear in the proper downstream order for that station. Water-quality records that are "partial" only--obtained systematically but less than quarterly--are presented by basins in a single table for the entire State.

For all stations with continuing records, information is provided in descriptive headings preceding tabular data. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence as listed.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality record are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

Records of Ground-Water Levels

Only water-level data from a network of selected observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in Nebraska are shown in figure 5.

Although, in this report, records of water levels are presented for only 58 wells, records are obtained through cooperative efforts of many Federal, State, and local agencies for several thousand observation wells throughout Nebraska and are placed in computer storage. Each spring, the Nebraska District and the Conservation and Survey Division of the University of Nebraska publish a report for the previous calendar year entitled "Groundwater Levels in Nebraska, 19__." This report contains hydrographs of recorder wells, detailed maps showing changes in water levels from the previous year, and other useful items. Information about the availability of the data in the water-level file may be obtained from the District Chief, Nebraska District. (See address on back of front page.)

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well insure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number, an alphanumeric number, derived from the township-range location of the well.

Water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

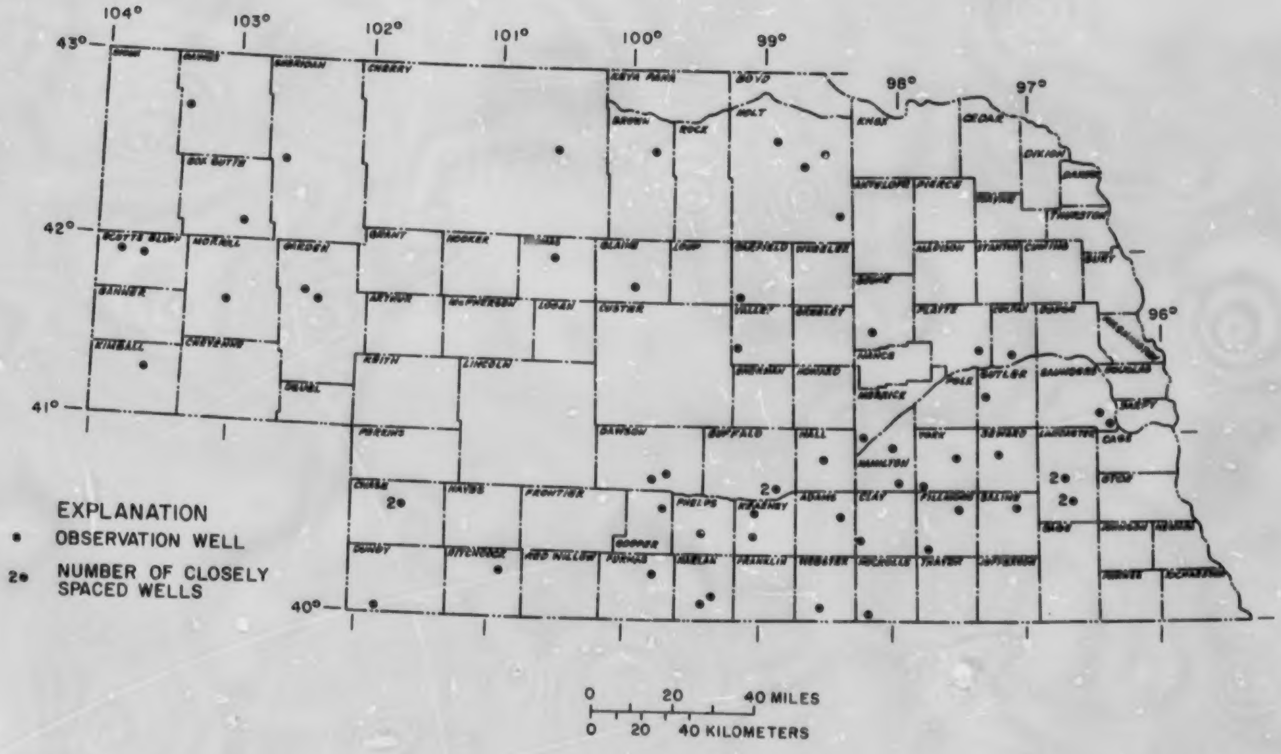

104°
103°
102°
101°
100°
99°
98°
97°
96°
43°
42°
41°
40°
SIOUX
DAWES
SHERIDAN
CHERRY
KEYA PAHA
BOYD
BROWN
ROCK
HOLT
KNOX
CEDAR
DIXON
DAKOTA
ANTELOPE
PIERCE
WAYNE
THURSTON
BOX BUTTE
SCOTTS BLUFF
MORRILL
GARDEN
GRANT
HOOKER
THOMAS
BLAINE
LOUP
GARFIELD
WHEELER
BOONE
MADISON
STANTON
CUMING
BURT
BANNER
ARTHUR
McPHERSON
LOGAN
CUSTER
VALLEY
GREELEY
PLATTE
COLFAX
DODGE
WASHINGTON
KIMBALL
CHEYENNE
DEUEL
KEITH
LINCOLN
SHERMAN
HOWARD
NANCE
POLK
BUTLER
SAUNDERS
DOUGLAS
MERRICK
SARPY
PERKINS
DAWSON
BUFFALO
HALL
HAMILTON
YORK
SEWARD
LANCASTER
CASS
CHASE
HAYES
FRONTIER
PHELPS
KEARNEY
ADAMS
CLAY
FILLMORE
SALINE
OTOE
GAGE
JOHNSON
NEMAHA
DUNDY
HITCHCOCK
RED WILLOW
FURNAS
GOSPER
HARLAN
FRANKLIN
WEBSTER
NUCKOLLS
THAYER
JEFFERSON
PAWNEE
RICHARDSON
2●
EXPLANATION
● OBSERVATION WELL
2● NUMBER OF CLOSELY SPACED WELLS
0 20 40 MILES
0 20 40 KILOMETERS

Figure 5.--Location of selected observation wells.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements. The quality of ground water ordinarily changes slowly, if at all, so that frequent measuring of the same parameters is not necessary unless one is concerned with a particular problem such as monitoring for trends in nitrate concentration.

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

All samples were obtained by trained personnel. Wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to metals comprising the casings.

Tables of water-quality data are presented by counties arranged in alphabetical order. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations.

Access to WATSTORE Data

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's district offices (see address given on back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-seven manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett St., Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.

3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. *Measurement of time of travel and dispersion in streams by dye tracing*, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.

3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages

8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the weight or amount of residue present after the residue from the dry mass determination has been asked in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in g/m^3 (grams per cubic meter), and periphyton and benthic organisms in g/m^2 (grams per square meter).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass, and represents the actual weight of the living matter. The organic mass weight is expressed in the same units as for ash and dry mass.

Wet mass is the mass of living matter plus contained water.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second (cfs, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45-μm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage-height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins that have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per kilogram (μg/kg) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (kilogram) of sediment.

Micrograms per liter (UG/L, μg/L) is a unit for expressing the concentration of chemical constituents in solution. It represents one one-thousandth of a milligram of constituent in a liter of solution.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Milligrams or micrograms per liter may be converted to milliequivalents per liter by using appropriate factors. Concentrations of suspended sediment also is expressed in mg/L and is based on the mass of sediment per liter of water-sediment mixture. Sediment concentration in milligrams per liter also may be converted to parts per million by using appropriate factors.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National stream-quality accounting network (NASQAN) is a data-collection network designed by the Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by eight-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis, and (2) to detect and assess long-term changes in streamflow and stream quality.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m^2), acres, or hectares. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter code is a five-digit number assigned to identify, uniquely, a specific constituent or property. The parameter codes used by the Geological Survey are assigned by the U.S. Environmental Protection Agency and are identical to those used in the STORET data system. They are used widely by Federal and State agencies; data listed under a given code by one agency should be comparable to data listed under the same code by other agencies.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation
Silt..........	.004 - .062	Sedimentation
Sand..........	.062 - 2.0	Sedimentation or sieve
Gravel........	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants, respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth (1×10^{12}) of the amount of ratioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Polychlorinated biphenyls (PCB's) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Recurrence interval is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that is discharged in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during a given time.

7-day 10-year low flow ($7 Q_{10}$) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reaction with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigating land.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream or from well to well, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom....................	Animal
Phylum.....................	Arthropoda
Class......................	Insecta
Order......................	Ephemeroptera
Family.....................	Ephemeridae
Genus......................	Hexagenia
Species....................	Hexagenia limbata

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1980, is called the "1980 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual basic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

STATION RECORDS, SURFACE WATER

WHITE RIVER BASIN

06444000 WHITE RIVER AT CRAWFORD, NE

LOCATION.--Lat 42°41'33", long 103°25'03", in W1/2 sec.3, T.31 N., R.52 W., Dawes County, Hydrologic Unit 10140201, on right bank 15 ft downstream from bridge in city park at Crawford.

DRAINAGE AREA.--313 mi^2.

PERIOD OF RECORD.--February 1931 to September 1943, October 1947 to current year.

REVISED RECORDS.--WSP 1309: 1931(M), 1942(M). WSP 1729: 1958-59 (M). WSP 1917: 1958-59.

GAGE.--Water-stage recorder. Datum of gage is 3,659.85 ft National Geodetic Vertical Datum of 1929. Feb. 25, 1931, to Oct. 2, 1933, nonrecording gage at old highway bridge 0.5 mi upstream at different datum and Oct. 3, 1933, to Sept. 30, 1943, 1 mi upstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Some regulation at low flows by pumps for irrigation and diversion for water supply for town of Crawford.

AVERAGE DISCHARGE.--49 years, 20.1 ft^3/s, 14,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,580 ft^3/s Mar. 15, 1948, gage height, 6.88 ft; maximum gage height, 7.7 ft July 10, 1958, from floodmarks; minimum daily discharge, 2.7 ft^3/s Aug. 13, 31, Sept. 1, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39 ft^3/s Mar. 27, gage height, 1.92 ft; maximum gage height, 3.45 ft Jan. 21, backwater from ice; no peak above base of 100 ft^3/s; minimum daily discharge, 11 ft^3/s July 29, 30, Aug. 9-12, 15, 28-31, Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	19	20	21	25	25	22	29	25	16	14	12
2	18	19	20	22	25	25	23	28	25	16	13	12
3	16	20	20	22	26	25	24	28	25	15	13	12
4	16	19	21	22	25	24	24	28	25	17	13	12
5	16	19	19	22	26	23	24	28	25	17	13	12
6	15	20	18	23	26	23	24	29	28	15	12	11
7	16	20	18	22	27	23	24	29	25	14	12	12
8	16	20	18	21	27	23	23	29	24	14	12	12
9	16	21	19	21	27	25	23	26	25	14	11	12
10	18	20	20	20	26	23	23	27	24	17	11	12
11	17	20	21	20	27	24	23	27	24	17	11	13
12	17	20	21	20	26	23	23	26	24	14	11	13
13	17	20	20	19	23	24	22	25	22	14	12	13
14	18	21	19	19	27	24	22	25	22	14	13	14
15	19	22	20	18	28	24	22	25	22	14	11	14
16	19	22	20	19	26	23	23	24	21	14	12	14
17	19	23	20	20	26	24	23	24	22	13	13	14
18	19	22	20	19	26	24	22	23	22	13	13	13
19	19	20	21	20	25	24	22	23	21	13	13	13
20	18	19	21	20	25	24	25	22	21	13	12	13
21	18	19	21	21	26	24	26	22	20	13	13	13
22	18	19	21	22	26	23	25	22	19	13	15	13
23	18	18	21	23	26	24	23	21	18	12	14	14
24	19	18	21	24	26	23	23	21	18	12	13	15
25	18	19	21	25	25	23	28	23	18	15	13	16
26	17	19	22	26	25	24	32	24	18	14	12	16
27	18	17	22	25	25	23	27	29	17	13	12	16
28	18	18	21	25	24	25	26	26	17	12	11	16
29	18	19	20	27	25	24	30	26	16	11	11	16
30	18	20	21	26	---	24	29	25	16	11	11	16
31	18	---	21	25	---	22	---	25	---	12	11	---
TOTAL	544	592	628	679	747	736	730	789	649	432	381	404
MEAN	17.5	19.7	20.3	21.9	25.8	23.7	24.3	25.5	21.6	13.9	12.3	13.5
MAX	19	23	22	27	28	25	32	29	28	17	15	16
MIN	15	17	18	18	23	22	22	21	16	11	11	11
AC-FT	1080	1170	1250	1350	1480	1460	1450	1560	1290	857	756	801

CAL YR 1983	TOTAL	7830	MEAN	21.5	MAX	47	MIN	10	AC-FT	15530
WTR YR 1984	TOTAL	7311	MEAN	20.0	MAX	32	MIN	11	AC-FT	14500

06453500 PONCA CREEK AT ANOKA, NE

LOCATION.--Lat 42°56'34", long 98°50'25", in NE1/4 sec.9, T.34 N., R.13 W., Boyd County, Hydrologic Unit 10150001, on downstream side of left pier of bridge on State Highway 11, 0.5 mi southwest of Anoka and 0.5 mi upstream from Dry Creek.

DRAINAGE AREA.--505 mi^2.

PERIOD OF RECORD.--March 1949 to current year.

REVISED RECORDS.--WSP 2117: Drainage area.

GAGE.--Water-stage recorder for stages above 0.4 ft and nonrecording gage read once daily. Altitude of gage is 1,630 ft from topographic map. Prior to Sept. 13, 1950, nonrecording gage at same site and datum.

REMARKS.--Records good except those for Nov. 2 to Feb. 25, which are poor.

AVERAGE DISCHARGE.--35 years, 46.3 ft^3/s, 33,540 acre-ft/yr; median of yearly mean discharge, 33 ft^3/s, 23,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,810 ft^3/s, Mar. 27, 1960, gage height, 16.86 ft; no flow at times in 1949-50, 1955-62, 1965-71, 1974-76, 1978-82.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 17	1155	620	a5.30	Apr. 14	1140	*2140	a7.98
Mar. 25	unknown	900	b5.65				

a Observed
b About

Minimum daily discharge, 6.0 ft^3/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	14	28	13	27	150	201	243	187	40	32	11
2	6.0	16	28	14	28	130	234	212	149	39	34	11
3	6.2	18	27	15	29	100	417	198	124	39	49	11
4	6.4	19	26	16	30	130	444	189	119	39	42	11
5	6.7	19	25	17	30	130	508	171	126	39	36	10
6	6.7	19	22	18	32	120	514	173	274	37	28	9.9
7	7.0	20	24	19	33	120	580	158	184	35	23	9.6
8	6.4	20	25	20	34	110	657	134	203	39	22	10
9	7.0	24	23	18	36	130	626	120	146	37	21	9.4
10	7.2	26	24	16	35	140	554	111	123	122	19	9.9
11	8.1	24	23	17	34	120	607	179	118	60	18	10
12	7.5	29	21	17	32	120	761	191	780	42	17	10
13	8.1	31	19	14	35	110	1450	152	311	36	16	9.6
14	8.3	30	18	12	40	150	1920	127	155	32	15	9.1
15	8.6	29	17	14	42	250	1270	119	123	31	16	9.6
16	8.6	30	15	14	40	510	904	103	119	31	15	9.6
17	9.1	36	14	13	38	580	681	93	310	34	17	9.6
18	9.6	34	13	11	36	500	433	86	156	33	16	9.9
19	11	42	13	12	35	330	328	127	98	30	15	9.6
20	13	38	12	11	33	310	249	91	80	28	16	9.1
21	14	35	13	14	38	330	226	76	72	28	22	8.6
22	14	33	12	13	50	520	230	73	70	26	24	8.3
23	13	31	10	14	80	650	208	68	62	25	22	8.3
24	13	32	9.0	16	110	780	201	65	58	23	19	9.4
25	12	32	10	18	140	871	226	62	59	28	17	9.6
26	13	31	12	19	140	600	173	62	52	38	14	10
27	13	30	12	21	120	452	171	213	49	44	13	11
28	13	29	11	22	100	354	145	469	45	40	13	12
29	12	27	11	24	135	266	165	274	42	33	12	12
30	13	26	10	23	---	226	305	191	41	29	11	12
31	13	---	12	25	---	204	---	191	---	28	11	---
TOTAL	300.7	824	539.0	510	1592	9493	15388	4721	4435	1165	645	300.1
MEAN	9.70	27.5	17.4	16.5	54.9	306	513	152	148	37.6	20.8	10.0
MAX	14	42	28	25	140	871	1920	469	780	122	49	12
MIN	6.0	14	9.0	11	27	100	145	62	41	23	11	8.3
AC-FT	596	1630	1070	1010	3160	18830	30520	9360	8800	2310	1280	595

CAL YR 1983 TOTAL 29624.1 MEAN 81.2 MAX 1210 MIN 4.8 AC-FT 58760
WTR YR 1984 TOTAL 39912.8 MEAN 109 MAX 1920 MIN 6.0 AC-FT 79170

06453600 PONCA CREEK AT VERDEL, NE

LOCATION.--Lat 42°48'40", long 98°10'35", in NE1/4NE1/4 sec.30, T.33 N., R.7 W., Knox County, Hydrologic Unit 10150001, near left bank at left downstream end of bridge on State Highway 12, 0.6 mi east of Verdel and 3.1 mi upstream from mouth.

DRAINAGE AREA.--812 mi².

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 2117: Drainage area.

GAGE.--Water-stage recorder and nonrecording gage read once daily. Datum of gage 1,232.9 ft National Geodetic Vertical Datum of 1929 (Nebraska Department of Roads reference marks). See WSP 1917 for history of changes prior to Nov. 15, 1962.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--27 years, 76.1 ft³/s, 55,130 acre-ft/yr; median of yearly mean discharges, 56 ft³/s, 40,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s Mar. 27, 1960, gage height, 15.10 ft, site and datum then in use; no flow for many days in 1957-60, 1965-72, 1974-77, 1979-81.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 13	2400	2190	8.43	June 12	2100	1570	7.21
May 1	0300	1020	5.92	June 17	1500	1150	6.25
June 6	1200	*3190	10.14	July 10	2000	890	5.56

Minimum daily discharge, 15 ft³/s Oct. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	24	39	21	38	200	388	873	305	94	56	36
2	16	24	40	23	39	195	424	643	299	93	57	36
3	16	26	38	26	41	190	1190	528	251	89	62	33
4	16	28	37	27	42	180	1090	496	224	89	79	34
5	16	28	35	28	43	180	1040	458	229	87	89	32
6	16	28	33	30	45	160	806	464	1930	88	78	32
7	16	29	33	33	47	160	861	467	775	81	77	32
8	15	29	34	36	50	160	1010	376	441	78	62	33
9	15	35	34	36	52	180	1010	329	367	84	53	32
10	17	37	34	33	50	200	789	308	342	366	49	33
11	16	34	32	33	47	225	780	351	280	431	46	35
12	16	40	29	33	45	250	1210	480	905	212	44	37
13	17	42	27	30	50	300	1670	576	937	128	39	35
14	18	41	26	27	52	400	1940	418	476	94	37	32
15	18	40	25	25	56	800	1550	339	326	83	36	33
16	18	42	24	25	54	1200	1280	296	620	74	40	33
17	19	47	22	22	50	1400	1010	261	660	68	44	32
18	20	45	21	22	47	1100	784	239	712	64	44	30
19	25	56	20	22	47	600	600	227	373	65	39	29
20	27	51	20	24	45	552	499	254	366	60	48	27
21	25	45	20	25	60	407	446	215	249	56	142	26
22	26	44	18	25	80	700	502	198	205	51	80	25
23	26	42	18	26	110	1010	533	180	177	50	59	25
24	24	40	17	28	160	1110	460	170	152	53	129	29
25	23	41	17	30	190	1280	381	162	144	68	89	32
26	22	40	17	32	210	1090	378	155	142	93	58	33
27	23	39	18	32	205	870	441	284	126	107	47	34
28	22	39	18	33	200	698	358	648	114	90	41	35
29	21	38	17	34	200	522	400	650	112	80	38	37
30	22	37	19	34	---	443	717	420	101	69	34	38
31	23	---	20	35	---	417	---	329	---	59	34	---
TOTAL	610	1131	802	890	2355	17179	24547	11794	12341	3204	1830	970
MEAN	19.7	37.7	25.9	28.7	81.2	554	818	380	411	103	59.0	32.3
MAX	27	56	40	36	210	1400	1940	873	1930	431	142	38
MIN	15	24	17	21	38	160	358	155	101	50	34	25
AC-FT	1210	2240	1590	1770	4670	34070	48690	23390	24480	6360	3630	1920

CAL YR 1983 TOTAL 53333 MEAN 146 MAX 1720 MIN 13 AC-FT 105800
WTR YR 1984 TOTAL 77653 MEAN 212 MAX 1940 MIN 15 AC-FT 154000

06454000 NIOBRARA RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 42°39'33", long 104°03'54", in SE1/4SW1/4 sec.15, T.31 N., R.60 W., Niobrara County, Wyoming, Hydrologic Unit 10150002, on left bank 0.2 mi downstream from Van Tassel Creek, 0.3 mi upstream from Wyoming-Nebraska State line, and 3 mi east of Van Tassel, WY.

DRAINAGE AREA.--450 mi^2, approximately.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,687.70 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversions for irrigation of about 4,700 acres above station.

AVERAGE DISCHARGE.--29 years, 3.85 ft^3/s, 2,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft^3/s Aug. 16, 1977, gage height, 8.28 ft in gage well, from rating curve extended above 800 ft^3/s on basis of computation of peak flow from slope-area measurement; minimum daily, 0.54 ft^3/s Aug. 9, 10, 12, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 54 ft^3/s May 2 at 1600, gage height, 2.71 ft; no other peak above base of 20 ft^3/s; maximum gage height, 5.74 ft Apr. 28, backwater from snow in channel; minimum daily discharge, 1.2 ft^3/s Dec. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.2	1.6	1.9	2.2	2.5	3.8	10	3.7	2.8	2.6	1.9
2	1.7	2.2	1.6	1.9	2.2	2.6	3.8	22	3.4	2.8	2.4	1.8
3	1.8	2.2	1.6	1.9	2.2	2.6	3.8	9.4	3.2	3.0	2.3	1.8
4	1.8	2.2	1.6	2.0	2.2	2.8	3.6	7.7	3.1	3.2	2.3	1.7
5	1.7	2.2	1.6	2.2	2.2	2.8	3.6	9.7	3.1	3.1	2.2	1.7
6	1.6	2.1	1.5	2.2	2.2	2.8	3.8	10	4.4	3.4	2.2	1.7
7	1.6	2.2	1.5	2.2	2.3	2.8	3.6	10	3.9	3.1	2.2	1.7
8	1.6	2.0	1.5	2.3	2.3	2.8	3.6	8.2	3.6	3.4	2.2	1.7
9	1.5	2.1	1.5	2.2	2.2	2.8	3.5	6.7	3.6	3.6	2.2	1.7
10	1.6	2.1	1.5	2.3	2.2	2.8	3.5	6.7	3.4	4.9	2.1	1.7
11	1.7	2.1	1.6	2.4	2.3	2.9	3.2	6.7	3.2	3.5	2.1	1.7
12	1.6	2.0	1.6	2.4	2.3	3.0	3.5	6.9	3.0	3.6	2.1	1.7
13	1.6	1.9	1.6	2.3	2.3	3.1	3.4	6.5	2.9	3.8	2.0	1.7
14	1.6	1.9	1.6	2.3	2.3	3.5	3.4	6.7	3.0	3.8	2.0	1.8
15	1.7	2.0	1.5	2.1	2.3	3.5	3.1	6.2	3.1	3.2	2.0	2.0
16	1.7	2.0	1.4	2.1	2.3	3.4	3.1	5.8	5.2	3.4	2.0	2.0
17	1.8	2.0	1.4	2.0	2.3	3.6	3.2	4.9	8.2	3.0	1.9	2.0
18	1.9	2.0	1.4	1.9	2.3	3.6	3.0	4.5	4.4	2.9	1.9	1.8
19	2.0	2.0	1.4	2.0	2.4	3.9	3.1	4.9	3.9	2.9	1.8	1.8
20	2.0	2.0	1.4	2.0	2.4	4.0	3.5	5.4	3.9	2.9	1.8	1.7
21	2.0	2.0	1.3	2.0	2.4	4.0	4.4	4.5	3.4	2.9	1.9	1.7
22	2.0	2.0	1.3	2.0	2.4	4.0	4.0	4.2	3.2	2.9	2.0	2.0
23	2.0	1.8	1.2	2.0	2.6	4.0	3.5	4.0	3.0	2.8	1.8	2.0
24	2.1	1.8	1.6	2.0	2.5	3.9	3.4	4.5	2.9	3.2	1.8	2.1
25	2.1	1.8	1.8	2.0	2.4	3.9	3.9	5.2	2.9	3.0	1.8	2.1
26	2.1	1.8	1.7	2.0	2.4	4.0	3.0	5.0	2.8	2.8	1.8	2.0
27	2.1	1.7	1.7	2.0	2.5	3.9	3.0	4.8	2.9	2.6	1.7	2.2
28	2.1	1.7	1.8	2.2	2.5	3.8	3.0	4.6	2.9	2.6	1.7	2.2
29	2.2	1.7	1.9	2.2	2.5	3.9	3.2	4.4	2.8	2.5	1.7	2.2
30	2.2	1.6	1.8	2.1	---	3.8	3.4	4.2	2.6	2.4	1.7	2.2
31	2.2	---	1.8	2.1	---	3.8	---	4.1	---	3.5	1.8	---
TOTAL	57.4	59.3	48.3	65.2	67.6	104.8	103.9	208.4	105.6	97.5	62.0	56.3
MEAN	1.85	1.98	1.56	2.10	2.33	3.38	3.46	6.72	3.52	3.15	2.00	1.88
MAX	2.2	2.2	1.9	2.4	2.6	4.0	4.4	22	8.2	4.9	2.6	2.2
MIN	1.5	1.6	1.2	1.9	2.2	2.5	3.0	4.0	2.6	2.4	1.7	1.7
AC-FT	114	118	96	129	134	208	206	413	209	193	123	112

CAL YR 1983 TOTAL 971.1 MEAN 2.66 MAX 20 MIN 1.2 AC-FT 1930
WTR YR 1984 TOTAL 1036.3 MEAN 2.83 MAX 22 MIN 1.2 AC-FT 2060

06454100 NIOBRARA RIVER AT AGATE, NE

LOCATION.--Lat 42°25'22", long 103°47'28", in SW1/4 sec.6, T.28 N., R.55 W., Sioux County, Hydrologic Unit 10150002, on right bank 10 ft upstream from timber farm-vehicle bridge, 300 ft upstream from bridge on State Highway 29, 0.2 mi northwest of Agate, and 14.5 mi upstream from Whistle Creek.

DRAINAGE AREA.--840 mi^2, approximately.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,405 ft, from topographic map. Prior to 1982 water year, altitude published as 4,440 ft. Prior to Nov. 3, 1960, nonrecording gage at present site and datum.

REMARKS.--Records good. Diversions for irrigation of about 6,700 acres above station.

AVERAGE DISCHARGE.--27 years, 14.0 ft^3/s, 10,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft^3/s June 23, 1959, gage height, 5.00 ft, from floodmark; minimum daily, 1.0 ft^3/s Mar. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59 ft^3/s May 2, gage height, 3.84 ft, no other peak above base of 35 ft^3/s; minimum daily, 2.5 ft^3/s Apr. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	6.0	8.7	11	19	20	29	12	8.3	8.1	6.6
2	10	13	9.0	8.8	12	21	21	54	12	8.3	7.9	6.7
3	10	12	13	8.8	12	20	22	51	13	8.3	6.9	6.7
4	11	11	13	9.1	12	19	21	49	12	10	6.6	6.6
5	10	11	11	9.1	12	16	21	44	13	8.8	6.9	6.6
6	10	11	11	9.7	13	18	21	41	14	8.6	6.2	6.5
7	10	14	9.8	10	13	17	22	39	13	7.9	6.3	6.8
8	10	13	10	11	14	16	22	35	13	8.5	6.1	6.7
9	11	14	13	11	14	17	21	29	12	9.9	5.9	7.4
10	11	14	13	11	15	16	21	22	13	11	5.9	7.2
11	11	14	14	12	14	17	21	22	15	10	5.7	7.0
12	11	15	14	12	15	18	18	22	14	9.5	5.8	7.3
13	11	16	14	12	15	19	17	21	14	9.5	5.8	7.0
14	11	15	13	12	17	21	16	20	14	9.2	5.7	7.3
15	12	15	13	11	16	22	16	24	14	9.2	5.7	7.6
16	12	15	11	11	16	21	16	22	12	10	6.0	7.6
17	12	16	11	10	18	22	15	20	15	10	5.9	8.0
18	12	16	11	9.9	18	22	13	18	13	8.9	6.0	7.7
19	12	16	11	10	17	21	12	17	12	8.5	6.2	7.5
20	12	16	8.7	10	16	22	15	16	12	8.8	5.9	7.3
21	12	15	8.2	10	16	22	23	16	12	8.8	6.7	7.2
22	12	12	8.1	10	18	22	23	15	11	8.7	8.0	7.4
23	12	14	8.3	10	19	22	22	14	11	8.8	7.6	7.6
24	12	11	7.8	10	18	22	20	12	11	8.9	7.6	7.8
25	12	14	8.7	10	19	22	21	14	11	9.3	7.7	8.2
26	12	13	8.3	10	19	24	26	14	10	7.6	7.5	8.3
27	12	7.3	8.0	10	17	24	6.9	16	9.5	7.4	7.2	8.4
28	12	10	7.9	10	15	23	4.5	15	9.2	6.8	6.8	8.4
29	12	12	8.4	11	18	22	7.6	15	8.9	6.5	6.3	8.5
30	12	9.3	8.3	11	---	21	26	14	8.2	6.4	6.1	8.6
31	12	---	8.6	11	---	21	---	13	---	7.1	6.5	---
TOTAL	352	396.6	320.1	320.1	449	629	551.0	753	363.8	269.5	203.5	222.5
MEAN	11.4	13.2	10.3	10.3	15.5	20.3	18.4	24.3	12.1	8.69	6.56	7.42
MAX	12	16	14	12	19	24	26	54	15	11	8.1	8.6
MIN	10	7.3	6.0	8.7	11	16	4.5	12	8.2	6.4	5.7	6.5
AC-FT	698	787	635	635	891	1250	1090	1490	722	535	404	441

CAL YR 1983 TOTAL 4826.8 MEAN 13.2 MAX 27 MIN 5.3 AC-FT 9570
WTR YR 1984 TOTAL 4830.1 MEAN 13.2 MAX 54 MIN 4.5 AC-FT 9580

06454500 NIOBRARA RIVER ABOVE BOX BUTTE RESERVOIR, NE

LOCATION.--Lat 42°27'35", long 103°10'15", in NE1/4 sec.27, T.29 N., R.50 W., Dawes County, Hydrologic Unit 10150002, on right bank 1 mi upstream from high-water line of Box Butte Reservoir and 6 mi east of Marsland.

DRAINAGE AREA.--1,400 mi^2, approximately.

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 1917: 1951, 1952(P), 1957(M).

GAGE.--Water-stage recorder. Concrete control since Oct. 12, 1953. Datum of gage is 4,012.47 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 27, 1949, nonrecording gage at present site and datum.

REMARKS.--Records good. Diversions for irrigation of about 12,800 acres above station.

AVERAGE DISCHARGE.--38 years, 29.7 ft^3/s, 21,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,950 ft^3/s July 28, 1951, gage height, 10.30 ft, from rating curve extended above 230 ft^3/s on basis of step-backwater analysis and slope-area measurement at gage height 9.22 ft; minimum daily, 1.6 ft^3/s Sept. 26, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 71 ft^3/s May 3, gage height, 3.70 ft, no peak above base of 100 ft^3/s; maximum gage height, 4.73 ft Dec. 31, backwater from ice; minimum daily discharge, 9.5 ft^3/s Aug. 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	22	25	22	25	38	40	53	20	10	15	10
2	16	21	26	22	25	42	41	58	21	11	15	10
3	17	20	27	22	26	41	42	67	21	12	15	10
4	17	20	28	23	24	43	44	65	19	13	15	10
5	17	20	28	26	26	40	45	59	20	12	15	10
6	18	20	28	26	25	37	50	56	24	13	15	10
7	17	20	29	26	26	41	50	55	23	15	15	10
8	18	21	28	27	27	30	46	56	23	16	15	10
9	18	23	27	28	27	41	44	56	25	16	14	10
10	19	23	28	27	27	36	42	56	23	18	13	10
11	20	24	28	29	31	44	42	55	24	16	12	11
12	22	25	29	28	27	42	41	53	22	15	12	11
13	22	25	28	28	30	40	39	52	21	15	10	10
14	23	25	28	27	34	41	39	49	20	15	10	11
15	22	24	28	25	34	42	38	46	19	14	9.5	11
16	23	25	27	20	32	43	34	34	18	14	9.5	12
17	23	25	29	22	34	43	33	27	18	14	9.5	12
18	23	25	29	20	36	43	33	26	20	14	10	11
19	23	25	29	25	36	45	32	33	20	14	10	11
20	23	25	29	25	32	46	36	27	18	14	11	11
21	23	25	28	22	38	45	40	21	17	13	11	10
22	23	22	28	20	36	44	42	19	17	12	12	11
23	23	20	27	20	37	45	42	21	18	12	12	11
24	23	26	26	23	40	45	41	22	18	12	12	12
25	23	29	24	25	40	45	46	36	16	14	12	12
26	23	26	22	25	42	45	52	31	15	16	14	12
27	23	20	21	25	39	44	55	30	14	17	14	12
28	23	24	21	27	36	43	59	27	14	15	13	12
29	23	22	21	27	38	42	49	26	12	15	12	12
30	23	22	20	22	---	40	46	26	10	15	12	13
31	22	---	19	25	---	40	---	22	---	15	10	---
TOTAL	649	694	815	759	930	1296	1283	1264	570	437	384.5	328
MEAN	20.9	23.1	26.3	24.5	32.1	41.8	42.8	40.8	19.0	14.1	12.4	10.9
MAX	23	29	29	29	42	46	59	67	25	18	15	13
MIN	16	20	19	20	24	30	32	19	10	10	9.5	10
AC-FT	1290	1380	1620	1510	1840	2570	2540	2510	1130	867	763	651

CAL YR 1983	TOTAL	10675	MEAN	29.2	MAX	79	MIN	12	AC-FT 21170
WTR YR 1984	TOTAL	9409.5	MEAN	25.7	MAX	67	MIN	9.5	AC-FT 18660

06455000 BOX BUTTE RESERVOIR NEAR HEMINGFORD, NE

LOCATION.--Lat 42°27'30", long 103°04'03", in sec.28, T.29 N., R.49 W., Dawes County, Hydrologic Unit 10150002, in control tower on dam near left bank on Niobrara River, 9 mi north of Hemingford.

DRAINAGE AREA.--1,460 mi², approximately.

PERIOD OF RECORD.--October 1945 to current year.

GAGE.--Electric tape gage read three or more times a month. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam; outlet gate first closed Oct. 3, 1945. Usable capacity, 30,420 acre-ft between elevations 3,969.00 ft, sill of outlet gate, and 4,007.00 ft, crest of spillway. Dead storage, 640 acre-ft. Figures given herein represent total contents. Water is used for irrigation of Mirage Flats project of Bureau of Reclamation.

COOPERATION.--Records of elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,210 acre-ft Mar. 26, 1948, elevation, 4,007.70 ft; minimum observed since operation of reservoir began, 764 acre-ft Aug. 23 to Sept. 14, 1976, elevation, 3,969.82 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 21,400 acre-ft June 30, elevation, 4,000.30 ft; minimum observed, 2,890 acre-ft Sept. 7, elevation, 3,978.15 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)a/	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	3,986.96	7,830	-
Oct. 31	3,987.87	8,510	+680
Nov. 30	3,990.43	10,650	+2,140
Dec. 31	3,991.90	12,000	+1,350
CAL YR 1983	-	-	+1,090
Jan. 31	3,993.16	13,230	+1,230
Feb. 29	3,994.73	14,830	+1,600
Mar. 31	3,996.93	17,250	+2,420
Apr. 30	3,998.77	19,450	+2,200
May 31	4,000.05	21,080	+1,630
June 30	4,000.30	21,400	+320
July 31	3,989.84	10,130	-11,270
Aug. 31	3,978.90	3,200	-6,930
Sept. 30	3,979.97	3,700	+500
WTR YR 1984	-	-	-4,130

a Elevations read on or near last day of month.

06455500 NIOBRARA RIVER BELOW BOX BUTTE RESERVOIR, NE

LOCATION.--Lat 42°27'25", long 103°04'05", in SE1/4 sec.28, T.29 N., R.49 W., Dawes County, Hydrologic Unit 10150003, on left bank 0.2 mi downstream from Box Butte Reservoir and 9 mi north of Hemingford.

DRAINAGE AREA.--1,460 mi², approximately.

PERIOD OF RECORD.--October 1946 to current year.

GAGE.--Water-stage recorder. Concrete control since Apr. 11, 1953. Datum of gage is 3,950.08 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow completely regulated by Box Butte Reservoir (station 06455000).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 616 ft³/s July 2, 1968, gage height, 5.04 ft; minimum daily, 0.10 ft³/s for many days in 1947, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 220 ft³/s July 20, gage height, 4.47 ft; minimum daily, 0.74 ft³/s Sept. 21-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.86	.86	.83	.83	.95	.98	1.0	1.1	1.1	85	141	102
2	.83	.86	.83	.83	.95	.98	1.0	1.1	1.1	88	136	81
3	.83	.89	.83	.86	.95	1.0	1.0	1.0	1.1	101	127	79
4	.83	.89	.83	1.0	.95	1.0	1.0	1.0	1.1	121	116	73
5	.80	.89	.89	1.0	.98	1.0	1.1	1.0	1.2	136	136	57
6	.80	.89	.95	.89	.98	.98	1.1	1.0	1.2	146	169	57
7	.80	.89	.95	.89	.98	.98	1.1	1.1	1.2	169	177	18
8	.80	.92	.98	.89	.98	.98	1.1	1.0	1.1	177	172	.89
9	.80	.92	1.3	.89	.98	1.0	1.1	1.0	1.2	189	172	.86
10	.83	.92	1.6	.89	.98	1.0	1.1	1.0	1.2	186	169	.83
11	.83	.92	.95	.89	.98	1.0	1.2	1.0	1.2	180	175	.80
12	.83	.92	.89	.89	.98	1.0	1.1	1.0	1.2	164	183	.80
13	.80	.92	.89	.89	.98	1.0	1.1	1.0	1.2	151	180	.98
14	.80	.89	.89	.89	.98	1.0	1.1	1.0	1.2	133	177	.86
15	.83	.92	.89	.89	.98	1.0	1.1	1.0	1.1	136	156	.83
16	.83	.92	.89	.89	.98	1.0	1.1	1.0	1.2	153	125	.80
17	.83	.89	.89	.89	.98	1.0	1.1	1.0	1.2	177	110	.80
18	.83	.89	.89	.89	.98	1.0	1.1	1.0	1.3	201	104	.80
19	.80	.89	.89	.89	.98	1.0	1.1	1.0	1.2	207	116	.80
20	.80	.89	.89	.89	.98	1.0	1.2	1.0	1.2	207	131	.77
21	.80	.89	.89	.89	.98	1.0	1.2	1.0	1.1	210	141	.74
22	.80	.92	.89	.89	.98	1.0	1.2	1.0	1.4	217	134	.74
23	.80	.92	.89	.86	.98	1.0	1.2	1.0	1.2	213	125	.74
24	.80	.89	.89	.86	.98	1.0	1.2	1.1	1.1	213	112	.77
25	.80	.89	.89	.86	.98	1.0	1.3	1.0	1.1	162	97	.80
26	.80	.89	.86	.86	.98	1.0	1.2	1.1	1.1	101	97	.80
27	.80	.89	.86	.92	.98	1.0	1.1	1.1	1.0	123	106	.80
28	.83	.86	.86	.92	.98	1.0	1.1	1.1	1.0	123	123	.80
29	.83	.83	.83	.92	.98	1.0	1.1	1.1	1.0	134	129	.80
30	.83	.83	.83	.95	---	1.0	1.2	1.1	67	169	139	.80
31	.86	---	.83	.95	---	1.0	---	1.0	---	169	131	---
TOTAL	25.31	26.79	28.47	27.75	28.30	30.90	33.6	31.9	100.5	4941	4306	485.61
MEAN	.82	.89	.92	.90	.98	1.00	1.12	1.03	3.35	159	139	16.2
MAX	.86	.92	1.6	1.0	.98	1.0	1.3	1.1	67	217	183	102
MIN	.80	.83	.83	.83	.95	.98	1.0	1.0	1.0	85	97	.74
AC-FT	50	53	56	55	56	61	67	63	199	9800	8540	963

CAL YR 1983 TOTAL 8670.61 MEAN 23.8 MAX 201 MIN .77 AC-FT 17200
WTR YR 1984 TOTAL 10066.13 MEAN 27.5 MAX 217 MIN .74 AC-FT 19970

06457500 NIOBRARA RIVER NEAR GORDON, NE

LOCATION.--Lat 42°38'00", long 102°12'40", in NE1/4 sec.26, T.31 N., R.42 W., Sheridan County, Hydrologic Unit 10150003, on left bank 250 ft upstream from bridge on State Highway 27, 4 mi downstream from Rush Creek, and 11 mi south of Gordon.

DRAINAGE AREA.--4,290 mi^2, approximately.

PERIOD OF RECORD.--August 1928 to September 1932, October 1945 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,432.49 ft National Geodetic Vertical Datum of 1929. Aug. 24, 1928, to June 30, 1932, nonrecording gage at bridge 4 mi downstream at different datum. Dec. 3, 1945, to Mar. 24, 1970, water-stage recorder at datum 2.0 ft higher, Mar. 25, 1970, to July 28, 1982, at datum 1.0 ft higher.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by storage in Box Butte Reservoir (station 06455000) for irrigation of Mirage Flats project and return flow from irrigated land.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,130 ft^3/s May 21, 1962, gage height, 5.25 ft; minimum daily, 16 ft^3/s Dec. 20, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,230 ft^3/s June 4, gage height, 3.64 ft from floodmark; minimum daily discharge, 52 ft^3/s Aug. 14, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	102	120	110	170	98	114	155	87	122	96	61
2	100	102	110	114	180	115	127	151	89	110	88	62
3	101	95	110	118	190	121	126	148	79	100	79	64
4	102	95	110	120	186	108	155	161	780	88	75	62
5	97	95	120	122	180	103	175	156	200	79	77	65
6	95	98	130	125	186	97	186	135	180	75	63	69
7	88	102	120	125	161	91	186	128	180	72	70	66
8	94	102	130	125	118	96	180	137	175	72	73	65
9	102	122	135	130	98	88	159	138	159	71	75	104
10	100	113	140	135	99	87	164	140	169	91	67	82
11	101	106	140	140	108	88	186	149	169	129	67	80
12	97	113	140	140	118	91	192	136	139	108	61	82
13	102	113	140	140	123	94	154	124	109	91	56	72
14	99	113	136	130	125	128	151	113	109	94	52	85
15	108	102	136	125	123	135	156	111	102	89	57	82
16	105	91	134	120	117	135	145	110	102	86	74	85
17	99	98	120	100	108	129	133	110	126	84	86	88
18	109	102	110	80	104	142	125	89	124	88	86	75
19	135	95	106	90	94	154	126	89	134	81	82	67
20	106	91	104	90	85	132	130	89	144	83	80	62
21	102	95	100	100	84	132	153	93	130	80	83	59
22	102	90	100	100	102	132	167	90	148	75	79	62
23	106	88	98	115	115	136	154	75	150	72	88	67
24	98	90	98	120	112	126	142	66	135	75	77	72
25	102	92	96	118	129	121	171	87	126	109	71	82
26	109	94	96	120	134	137	204	93	114	116	64	82
27	109	96	96	120	129	135	176	113	94	97	60	75
28	95	110	96	120	125	117	127	123	91	79	59	82
29	102	120	96	130	103	114	160	127	75	67	52	88
30	102	125	98	140	---	126	165	110	67	62	57	88
31	102	---	104	150	---	123	---	96	---	73	60	---
TOTAL	3181	3050	3569	3712	3706	3631	4669	3642	4486	2718	2214	2235
MEAN	103	102	115	120	128	117	156	117	150	87.7	71.4	74.5
MAX	135	125	140	150	190	154	204	161	780	129	96	104
MIN	88	88	96	80	84	87	114	66	67	62	52	59
AC-FT	6310	6050	7080	7360	7350	7200	9300	7220	8900	5390	4390	4430

CAL YR 1983	TOTAL	44724	MEAN	123	MAX	426	MIN	50	AC-FT	88710
WTR YR 1984	TOTAL	40833	MEAN	112	MAX	780	MIN	52	AC-FT	80990

06459175 SNAKE RIVER AT DOUGHBOY, NE

LOCATION.--Lat 42°36'51", long 101°16'38", in NE1/4NW1/4, sec.2, T.30 N., R.34 W., Cherry County, Hydrologic Unit 10150005, on left bank 21 ft downstream from centerline of Doughboy bridge, 24 mi southwest of Nenzel.

DRAINAGE AREA.--405 mi^2, approximately, of which about 26 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--October 1981 to current year. Discharge measurements only, July 1963, April 1980, May-September 1981.

GAGE.--Water stage recorder. Datum of gage is 3,098.92 ft (revised) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358 ft^3/s Aug. 18, 1982, gage height, 1.84 ft; maximum gage height, 2.90 ft Jan. 7, 1982, backwater from ice; minimum daily discharge, 116 ft^3/s Feb. 9, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 252 ft^3/s Apr. 8, gage height, 1.54 ft; maximum gage height, 2.66 ft Nov. 28, backwater from ice; minimum daily discharge, 138 ft^3/s July 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	156	155	160	205	184	154	180	155	155	175	163
2	159	151	165	180	191	189	160	181	157	160	173	164
3	160	154	170	180	181	188	151	184	155	164	165	167
4	163	152	169	185	173	176	157	199	157	170	155	166
5	158	154	163	179	169	176	172	199	159	158	153	164
6	155	155	166	178	172	177	206	203	167	153	153	166
7	155	155	155	178	174	176	244	190	162	152	151	165
8	155	158	155	186	175	169	241	180	159	155	152	164
9	159	163	181	179	177	172	222	177	173	159	150	166
10	161	154	180	182	185	172	196	176	168	192	148	166
11	160	154	176	177	184	172	191	187	169	172	151	166
12	156	163	183	165	170	169	174	185	176	167	147	170
13	156	166	180	157	167	182	161	174	161	158	145	169
14	157	176	173	152	186	182	163	166	160	152	140	172
15	157	173	169	172	186	179	162	164	159	172	146	169
16	155	169	176	150	184	169	163	161	179	166	152	167
17	157	168	165	150	187	172	162	162	195	154	160	168
18	154	168	165	150	170	179	164	161	203	149	158	168
19	159	160	160	150	159	176	162	167	195	146	154	157
20	161	157	160	160	169	176	159	157	200	145	152	145
21	154	157	155	190	183	172	162	152	183	144	152	152
22	160	164	155	220	190	169	166	153	176	144	151	155
23	160	159	150	225	188	163	167	151	170	138	146	157
24	159	157	145	205	189	166	167	150	159	139	145	155
25	154	158	145	197	185	163	177	156	158	149	147	152
26	157	155	150	209	180	172	190	151	154	155	144	153
27	155	155	150	206	166	166	164	170	154	151	144	154
28	154	150	155	208	161	160	160	168	160	149	158	149
29	154	150	145	214	172	160	170	166	154	142	157	150
30	154	150	140	195	---	157	180	169	150	142	157	158
31	154	---	150	200	---	154	---	163	---	187	162	---
TOTAL	4873	4761	5006	5639	5178	5337	5267	5302	5027	4839	4743	4837
MEAN	157	159	161	182	179	172	176	171	168	156	153	161
MAX	163	176	183	225	205	189	244	203	203	192	175	172
MIN	154	150	140	150	159	154	151	150	150	138	140	145
AC-FT	9670	9440	9930	11180	10270	10590	10450	10520	9970	9600	9410	9590

CAL YR 1983	TOTAL	61620	MEAN	169	MAX	314	MIN	127	AC-FT 122200
WTR YR 1984	TOTAL	60809	MEAN	166	MAX	244	MIN	138	AC-FT 120600

06459300 MERRITT RESERVOIR NEAR BURGE, NE

LOCATION.--Lat 42°38'06", long 100°52'18", in SW1/4NW1/4 sec.29, T.31 N., R.30 W., Cherry County, Hydrologic Unit 10150005, in control house of outlet works of Merritt Dam, 8.1 mi southwest of Burge and 23 mi southwest of Valentine.

DRAINAGE AREA.--640 mi^2, approximately, of which about 44 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--February 1964 to current year.

REVISED RECORDS.--WDR NE-67: Drainage area.

GAGE.--Direct reading, single vertical column, mercury-well type manometer read once daily. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam; storage began Feb. 19, 1964. Usable capacity, 72,872 acre-ft between elevations 2,875.0 ft, sill of canal outlet works, and 2,946.0 ft, crest of spillway. Dead and inactive storage, 1,614 acre-ft below elevation 2,875.0 ft. Figures given herein represent total contents. Water is used for irrigation of Ainsworth Unit of Bureau of Reclamation.

COOPERATION.--Records of elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 78,040 acre-ft May 21, 1982, elevation 2,947.2 ft; minimum since appreciable storage was attained, 20,060 acre-ft Oct. 1, 1968, elevation, 2,916.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 74,780 acre-ft June 19-24, elevation, 2,946.1 ft; minimum observed, 47,620 ft^3/s Sept. 8, elevation, 2,935.2 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,939.0	56,000	-
Oct. 31	2,943.1	66,390	+10,390
Nov. 30	2,943.9	68,560	+2,170
Dec. 31	2,944.0	68,830	+270
CAL YR 1983	-	-	0
Jan. 31	2,943.6	67,740	-1,090
Feb. 29	2,943.3	66,930	-810
Mar. 31	2,943.6	67,740	+810
Apr. 30	2,943.9	68,560	+820
May 31	2,945.7	73,630	+5,070
June 30	2,945.8	73,910	+280
July 31	2,941.7	62,710	-11,200
Aug. 31	2,936.4	50,140	-12,570
Sept. 30	2,938.2	54,140	+4,000
WTR YR 1984	-	-	-1,860

06459500 SNAKE RIVER NEAR BURGE, NE

LOCATION.--Lat 42°39'15", long 100°51'28", in NE1/4 sec.20, T.31 N., R.30 W., Cherry County, Hydrologic Unit 10150005, on right bank 150 ft downstream from Nebraska National Forest boundary, 2.1 mi downstream from Merritt Dam, 6.5 mi southwest of Burge, and 22 mi southwest of Valentine.

DRAINAGE AREA.--660 mi², approximately, of which about 44 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--June 1947 to current year.

REVISED RECORDS.--WSP 1279: 1950(M), 1951(P). WDR NE-67,72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,805.36 ft National Geodetic Vertical Datum of 1929, (levels by Bureau of Reclamation).

REMARKS.--Records good. Natural flow affected by storage in Merritt Reservoir (station 06459300) 2.1 mi upstream.

AVERAGE DISCHARGE.--21 years (1963-84), 152 ft³/s, 110,100 acre-ft/yr, since storage and diversion began.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,170 ft³/s Feb. 7, 1963, gage height, 6.96 ft, release of storage behind temporary construction dike, from rating curve extended above 520 ft³/s on basis of slope-area measurement at gage height, 5.39 ft; minimum daily, 5.8 ft³/s May 24-27, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 333 ft³/s Jan. 22, gage height, 2.18 ft; maximum gage height, 2.21 ft Apr. 7; minimum daily discharge, 16 ft³/s Oct. 25-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	250	47	186	250	324	242	284	258	59	41	41	40
2	250	45	209	250	325	242	287	258	98	41	41	40
3	250	44	246	250	324	242	287	258	112	41	41	40
4	250	44	292	246	325	242	302	200	104	41	41	40
5	254	44	296	269	328	264	319	173	102	40	41	40
6	254	128	296	283	325	288	319	176	172	40	40	40
7	122	196	296	283	324	287	319	176	201	40	40	41
8	46	227	299	283	324	287	318	178	197	40	40	41
9	46	246	301	279	324	287	315	179	198	40	40	41
10	46	246	301	279	324	287	315	180	194	40	40	41
11	46	246	305	283	324	283	317	183	191	40	40	40
12	46	246	305	288	324	283	318	182	189	40	40	40
13	46	246	305	291	324	283	319	182	188	40	40	40
14	46	246	305	302	324	283	319	182	196	40	41	40
15	46	266	305	310	324	262	319	185	198	40	41	40
16	46	279	301	311	324	242	319	190	206	40	40	40
17	46	279	301	314	324	242	319	189	211	40	41	39
18	46	279	301	314	328	242	319	190	214	39	41	39
19	46	283	281	314	328	245	321	189	218	39	41	39
20	46	279	266	314	324	246	323	189	217	39	41	39
21	30	283	262	318	324	247	277	189	217	39	42	39
22	17	283	264	326	326	251	252	132	213	39	42	39
23	17	283	267	328	325	254	254	100	204	39	42	39
24	17	283	270	328	324	254	254	45	199	41	40	40
25	16	287	272	324	324	254	254	46	182	41	40	41
26	16	287	262	325	279	275	254	46	159	41	40	40
27	16	246	262	324	242	290	256	46	110	40	40	40
28	34	202	262	324	242	292	257	46	66	40	41	40
29	47	176	262	326	242	288	258	46	42	40	41	40
30	47	157	254	324	---	287	258	49	44	41	40	39
31	47	---	250	324	---	284	---	47	---	41	40	---
TOTAL	2532	6403	8584	9284	9123	8255	8832	4689	4901	1243	1259	1197
MEAN	81.7	213	277	299	315	266	294	151	163	40.1	40.6	39.9
MAX	254	287	305	328	328	292	323	258	218	41	42	41
MIN	16	44	186	246	242	242	252	45	42	39	40	39
AC-FT	5020	12700	17030	18410	18100	16370	17520	9300	9720	2470	2500	2370

CAL YR 1983 TOTAL 71640 MEAN 196 MAX 409 MIN 16 AC-FT 142100
WTR YR 1984 TOTAL 66302 MEAN 181 MAX 328 MIN 16 AC-FT 131500

BEST COPY AVAILABLE

06461000 MINNECHADUZA CREEK AT VALENTINE, NE

LOCATION.--Lat 42°53'10", long 100°33'10", in SW1/4 sec.30, T.34 N., R.27 W., Cherry County, Hydrologic Unit 10150004, on right bank 500 ft downstream from powerplant in city park at north edge of Valentine and 4 mi upstream from mouth.

DRAINAGE AREA.--390 mi^2, approximately, of which about 200 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--December 1947 to current year.

REVISED RECORDS.--WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,470 ft, from topographic map.

REMARKS.--Records good. Flow regulated by powerplant 500 ft above station.

AVERAGE DISCHARGE.--36 years (1948-84), 34.2 ft^3/s, 24,770 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft^3/s Mar. 22, 1960, gage height, 8.0 ft; minimum daily, 2.6 ft^3/s Feb. 22, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 214 ft^3/s Apr. 8, gage height, 3.05 ft; minimum daily, 4.5 ft^3/s Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	31	42	34	101	66	72	62	39	12	22	5.3
2	24	30	43	35	88	65	70	60	40	31	20	22
3	23	32	45	35	89	60	69	55	40	29	27	8.3
4	33	32	45	36	84	70	66	56	28	23	26	13
5	26	31	43	37	50	60	83	52	29	20	30	14
6	25	27	37	39	58	69	75	40	32	20	28	12
7	27	32	24	42	78	52	109	59	33	19	25	14
8	26	37	58	45	60	31	139	54	35	30	15	26
9	29	35	39	46	66	71	149	41	39	29	17	10
10	25	36	36	46	61	50	135	58	36	31	20	9.7
11	29	37	35	46	56	42	113	55	35	35	20	19
12	31	36	35	43	61	52	84	56	35	39	12	19
13	30	36	36	35	76	62	87	48	37	27	17	23
14	28	38	37	34	77	64	87	53	37	24	18	13
15	28	36	35	38	85	58	78	45	37	22	19	18
16	28	39	37	38	84	64	77	35	37	26	17	24
17	29	40	31	38	77	62	72	34	31	25	25	11
18	29	33	63	38	78	67	68	35	36	20	5.0	12
19	32	42	13	38	69	57	54	36	36	18	28	22
20	32	55	61	37	71	65	58	51	37	16	23	16
21	36	5.1	29	35	69	65	45	32	37	16	16	15
22	32	47	46	33	71	64	50	29	35	20	20	9.6
23	36	44	40	30	70	64	54	30	29	16	14	17
24	31	30	33	31	70	66	46	30	27	13	19	20
25	29	31	29	33	78	66	48	31	21	38	9.1	22
26	30	42	32	36	78	65	46	43	26	47	4.5	20
27	30	6.3	32	50	76	68	41	51	26	23	23	18
28	32	23	31	46	72	71	55	53	25	28	11	23
29	30	15	32	58	53	71	49	62	13	30	12	22
30	33	43	33	62	---	71	60	35	15	21	11	21
31	29	---	34	89	---	69	---	40	---	17	10	---
TOTAL	906	1001.4	1166	1283	2106	1927	2239	1421	963	765	563.6	498.9
MEAN	29.2	33.4	37.6	41.4	72.6	62.2	74.6	45.8	32.1	24.7	18.2	16.6
MAX	36	55	63	89	101	71	149	62	40	47	30	26
MIN	23	5.1	13	30	50	31	41	29	13	12	4.5	5.3
AC-FT	1800	1990	2310	2540	4180	3820	4440	2820	1910	1520	1120	990

CAL YR 1983	TOTAL	16285.6	MEAN	44.6	MAX	381	MIN	5.1	AC-FT	32300
WTR YR 1984	TOTAL	14839.9	MEAN	40.5	MAX	149	MIN	4.5	AC-FT	29430

06461500 NIOBRARA RIVER NEAR SPARKS, NE

LOCATION.--Lat 42°54'10", long 100°21'40", in SE1/4 sec.22, T.34 N., R.26 W., Cherry County, Hydrologic Unit 10150004, on left bank 18 ft downstream from highway bridge, 2.2 mi downstream from Big Beaver Creek, 5.5 mi downstream from Minnechaduza Creek, and 6.5 mi southwest of Sparks.

DRAINAGE AREA.--8,090 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1209: 1947(M), 1948-50(P). WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,287.57 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Natural flow of stream affected by irrigation and power developments, storage in Box Butte Reservoir (station 06455000), and since May 1964 by storage in Merritt Reservoir (station 06459300).

AVERAGE DISCHARGE.--39 years, 775 ft^3/s, 561,500 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft^3/s Mar. 5, 1949, gage height, 6.73 ft, from rating curve extended above 3,800 ft^3/s; maximum gage height recorded, 10.06 ft Feb. 7, 1973, ice jam; minimum daily discharge, 100 ft^3/s Jan. 10, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,120 ft^3/s June 6, gage height, 3.83 ft; maximum gage height, 8.15 ft Feb. 5, from floodmark, backwater from ice; minimum daily discharge, 447 ft^3/s Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	802	547	700	850	2000	970	966	964	683	517	599	560
2	826	558	800	900	1900	983	1050	1020	677	562	573	500
3	828	561	900	1000	1900	1030	1160	974	699	584	614	560
4	874	566	850	1150	2000	1050	990	950	712	623	603	520
5	796	547	840	1300	5000	1000	1090	895	691	610	590	540
6	773	545	840	1400	3000	1010	1180	926	1490	559	585	540
7	773	706	850	1500	1120	1030	1370	927	1000	509	596	560
8	575	756	900	1400	1010	980	1420	908	827	575	565	520
9	541	923	1000	1300	1050	944	1390	844	844	600	548	520
10	541	844	960	1400	1090	969	1310	813	815	688	525	520
11	554	846	900	1200	1080	947	1250	952	832	695	562	510
12	560	825	960	980	1100	964	1250	895	868	631	547	530
13	562	813	900	900	1080	961	1250	881	856	586	561	530
14	562	828	820	900	1060	979	1220	843	848	581	516	525
15	562	801	760	950	1130	1000	1150	844	856	556	522	500
16	553	865	700	1000	1150	1010	1040	799	924	564	535	500
17	571	837	600	1000	1130	991	1030	808	922	608	559	520
18	569	818	560	860	1120	963	1020	805	918	523	558	500
19	616	839	600	900	1040	957	966	926	948	498	575	480
20	622	869	650	820	1020	958	966	791	892	493	569	491
21	614	834	700	940	1030	963	975	778	864	472	554	465
22	552	900	800	1050	1080	960	903	766	828	498	563	469
23	527	864	1000	1150	1100	982	888	709	786	437	548	462
24	515	850	1000	1300	1120	933	867	654	745	437	549	447
25	510	798	950	1500	1150	955	878	659	729	896	563	463
26	509	740	1000	1400	1170	1090	1020	686	694	752	590	447
27	507	500	950	1500	1050	1080	982	772	645	694	590	481
28	507	300	900	1700	1030	1070	972	723	628	681	586	493
29	537	400	900	1600	991	1030	978	728	569	662	580	486
30	546	600	850	1500	---	993	979	709	516	592	570	481
31	553	---	850	2100	---	945	---	724	---	569	575	---
TOTAL	18937	21680	25990	37450	40701	30697	32510	25673	24306	18252	17570	15120
MEAN	611	723	838	1208	1403	990	1084	828	810	589	567	504
MAX	874	923	1000	2100	5000	1090	1420	1020	1490	896	614	560
MIN	507	300	560	820	991	933	867	654	516	437	516	447
AC-FT	37560	43000	51550	74280	80730	60890	64480	50920	48210	36200	34850	29990

CAL YR 1983 TOTAL 295713 MEAN 810 MAX 1720 MIN 300 AC-FT 586500
WTR YR 1984 TOTAL 308886 MEAN 844 MAX 5000 MIN 300 AC-FT 612700

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1982 to current year.
WATER TEMPERATURES: October 1982 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 354 micromhos Dec. 3, 1983; minimum daily, 192 micromhos June 25, 1983.
WATER TEMPERATURES: Maximum daily, 29.0°C June 19, 1983; minimum daily, 0.0°C on Dec. 1, Dec. 3, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 354 micromhos Dec. 3; minimum daily, 213 micromhos July 25.
WATER TEMPERATURES: Maximum daily, 28.0°C July 21, Aug. 6; minimum daily, 0.0°C on Dec. 1, Dec. 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
OCT 17...	1505	618	239	8.7	11.0	<1	93	0	30
NOV 15...	1500	896	235	8.7	5.0	10	93	0	30
DEC 14...	0900	817	228	8.0	.5	10	90	0	29
JAN 12...	0920	1060	233	8.1	.5	<1	90	0	29
FEB 09...	0900	1030	253	8.1	1.0	30	97	0	31
MAR 07...	0940	1050	249	8.1	.5	10	95	0	30
APR 06...	0855	1240	248	8.0	5.5	55	97	0	31
MAY 02...	0925	1050	265	8.2	6.5	35	100	0	32
JUN 27...	0925	702	248	8.3	20.0	30	97	0	31
JUL 26...	1020	784	240	8.2	20.5	45	94	0	30
AUG 21...	1545	554	242	8.4	26.0	25	97	0	31
SEP 19...	1605	165	236	8.3	24.5	40	93	0	30

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

WATER QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)
OCT									
17...	4.4	9.4	.4	5.7	108	7.1	1.6	.30	54
NOV									
15...	4.4	9.5	.4	6.1	111	8.0	1.9	.40	51
DEC									
14...	4.3	9.0	.4	5.7	104	8.8	1.3	.30	53
JAN									
12...	4.3	9.8	.5	7.3	107	9.1	1.5	.40	52
FEB									
09...	4.8	11	.5	6.9	121	10	1.7	.40	50
MAR									
07...	4.9	11	.5	6.5	119	9.5	1.6	.40	49
APR									
06...	4.3	12	.6	7.0	119	9.1	1.8	.90	46
MAY									
02...	5.4	14	.6	7.5	129	10	1.9	.50	47
JUN									
27...	4.8	12	.6	7.6	125	9.1	1.9	.50	52
JUL									
26...	4.6	12	.6	7.5	112	7.7	1.7	.40	48
AUG									
21...	4.8	11	.5	7.7	120	6.3	1.6	.50	55
SEP									
19...	4.3	9.3	.4	7.0	110	7.1	1.4	.40	54

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	BORON, DISSOLVED (UG/L AS B) (01020)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
OCT									
17...	180	.24	296	.53	.120	.070	20	16	4
NOV									
15...	180	.24	430	.51	.150	.090	20	16	3
DEC									
14...	170	.24	363	.59	.100	.090	20	22	4
JAN									
12...	180	.24	508	.61	.120	.090	20	31	7
FEB									
09...	190	.26	524	.53	.190	.080	30	42	5
MAR									
07...	180	.25	523	.46	.070	.070	20	45	4
APR									
06...	180	.25	516	.36	.170	.070	30	43	3
MAY									
02...	200	.27	555	.46	.150	.070	30	32	3
JUN									
27...	190	.26	368	<.10	.240	.050	30	18	<1
JUL									
26...	180	.24	379	<.10	.140	.030	50	32	2
AUG									
21...	190	.26	284	<.10	.090	<.010	30	12	5
SEP									
19...	180	.24	80	.38	.290	.050	30	15	3

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	230	242		---	249	---	---	274	292	260	243
2	217	227	253		---	252	251	268	273	288	246	248
3	229	229	246		---	244	---	261	273	295	242	250
4	217	228	354		---	---	246	287	268	273	244	245
5	216	229	242		---	243	247	272	257	278	---	240
6	218	224	237		237	244	257	---	266	276	248	240
7	219	223	240		245	242	---	260	281	253	247	241
8	225	218	235		246	256	---	267	293	248	251	240
9	232	219	236		245	246	284	270	269	235	252	235
10	262	215	228		244	240	280	272	261	236	255	238
11	236	225	231		243	---	282	258	257	247	254	241
12	241	222	235		244	242	281	268	248	246	254	237
13	235	220	---		246	245	---	274	268	251	267	235
14	238	220	---		246	247	276	269	256	252	248	240
15	238	222	237		244	240	---	273	245	251	253	237
16	316	223	244		246	---	275	267	248	250	248	236
17	235	223	248		247	235	271	265	---	251	251	236
18	235	222	268		243	---	270	267	240	255	250	236
19	232	217	---		243	241	273	263	245	240	---	250
20	236	218	---		239	246	268	---	282	252	249	235
21	237	219	---		242	242	261	280	260	251	248	238
22	236	215	---		243	250	272	259	272	---	250	229
23	247	220	---		246	244	265	271	246	253	251	---
24	238	219	---		245	246	270	278	257	255	253	231
25	235	217	---		245	---	263	271	259	213	249	233
26	239	---	---		246	242	265	263	244	238	249	230
27	237	---	---		254	240	266	262	258	249	244	236
28	236	---	---		252	245	268	---	255	246	246	230
29	238	---	---		247	245	---	271	261	248	254	232
30	---	221	---		---	245	263	267	261	249	250	236
31	229	---	---		---	248	---	273	---	246	250	---

TEMPERATURE, WATER (DEG C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.5	10.0	.0		---	6.0	---	10.0	20.0	26.5	25.0	23.0
2	16.0	10.0	1.0		---	5.5	5.0	11.0	17.5	26.0	26.0	23.5
3	14.5	12.0	.0		---	6.0	---	12.0	24.0	26.0	25.5	19.0
4	12.5	12.0	2.0		---	---	9.5	15.0	22.0	27.0	27.0	20.0
5	11.5	10.5	5.0		---	4.0	10.0	13.0	21.5	25.5	---	20.0
6	11.5	9.0	5.0		4.0	3.0	10.5	---	20.0	24.0	28.0	21.0
7	13.0	9.0	5.0		3.5	4.5	---	11.0	21.5	24.0	26.5	17.5
8	12.5	7.0	.5		5.0	4.5	---	12.0	20.5	27.0	27.0	18.0
9	13.0	4.0	.5		5.5	2.0	9.0	14.0	19.0	26.5	25.0	20.5
10	12.0	4.0	.5		4.5	3.0	10.5	17.0	21.0	25.5	25.0	16.5
11	11.0	5.0	.5		5.0	---	13.0	19.0	17.0	24.5	26.0	17.5
12	8.0	5.0	.5		5.0	5.0	9.5	20.0	21.0	25.0	26.0	19.5
13	6.0	4.5	---		6.0	7.5	---	23.0	22.0	26.5	25.0	19.0
14	7.0	5.0	---		7.0	9.0	10.0	18.0	24.0	25.0	24.0	17.0
15	19.0	5.0	1.5		6.5	8.0	---	16.0	25.0	24.0	24.0	14.5
16	11.0	4.0	2.0		5.5	---	13.0	22.0	25.5	27.0	22.5	17.5
17	10.0	6.0	1.5		4.0	6.0	14.0	20.0	---	26.0	25.0	16.0
18	10.5	6.0	1.5		3.5	---	15.0	21.0	23.0	25.5	25.5	19.0
19	10.0	5.0	---		4.5	6.5	13.0	20.0	24.5	27.0	---	20.0
20	9.5	3.0	---		5.0	7.5	15.0	---	25.5	26.0	23.5	19.0
21	8.0	5.0	---		6.0	10.0	10.5	19.0	25.0	26.0	23.5	16.5
22	10.0	2.0	---		7.0	7.0	12.0	18.0	26.5	---	22.5	19.0
23	11.0	4.0	---		7.0	8.5	13.0	17.5	26.0	25.0	23.5	---
24	9.0	5.0	---		6.5	11.0	14.0	20.0	27.0	23.5	23.0	9.0
25	7.0	5.0	---		5.0	---	12.5	18.0	25.5	23.0	24.5	9.0
26	8.0	---	---		4.5	9.0	12.0	15.0	26.0	23.0	24.5	9.5
27	9.0	---	---		3.0	8.0	8.0	19.0	24.5	23.5	25.0	9.5
28	8.5	---	---		4.0	7.0	9.0	---	25.5	24.5	25.0	8.0
29	6.5	---	---		3.5	6.5	---	17.5	25.0	26.0	24.5	7.5
30	---	5.0	---		---	7.5	9.5	16.5	25.5	24.5	21.0	12.0
31	9.5	---	---		---	8.0	---	23.0	---	25.0	23.0	---

06462500 PLUM CREEK AT MEADVILLE, NE

LOCATION.--Lat 42°45'05", long 99°52'05", in NE1/4NW1/4 sec.14, T.32 N., R.22 W., Brown County, Hydrologic Unit 10150004, on left bank 0.4 mi upstream from county road bridge, 1 mi upstream from mouth, 1 mi southwest of Meadville, and 17 mi north of Ainsworth.

DRAINAGE AREA.--600 mi², approximately, of which about 340 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1947 to September 1975, October 1976 to current year. Prior to October 1962, published as "near Meadville."

REVISED RECORDS.--WSP 1729: 1953. WSP 1917: 1953.

GAGE.--Water-stage recorder. Altitude of gage is 2,032 ft, from topographic map. Prior to Nov. 25, 1962, at site 6.5 mi upstream at different datum. Nov. 25, 1962, to Nov. 14, 1966, at present site at datum 3.0 ft higher. Nov. 15, 1966 to Oct. 2, 1979, at present site at datum 2.0 ft higher. Oct. 3, 1979 to June 3, 1982, at present site at datum 1.0 ft higher.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--35 years (1948-75, 1976-84), 112 ft³/s, 81,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,070 ft³/s Sept. 18, 1967, gage height, 5.98 ft present datum; maximum gage height observed, 8.54 ft Dec. 6, 1964, backwater from ice, present datum; minimum daily discharge, 15 ft³/s Feb. 19, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 2	2000	303	2.99	Apr. 8	2030	*1240	5.38
Feb. 25	1930	341	3.16	June 14	0730	303	3.62
Mar. 17	1700	463	3.51	July 26	1100	438	4.47
Mar. 21	1630	325	3.13				

Minimum daily discharge, 90 ft³/s Dec. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	113	125	120	242	234	226	319	176	134	252	123
2	103	116	120	125	277	242	227	313	174	135	209	131
3	110	125	120	130	275	252	222	318	169	147	199	125
4	118	157	115	135	248	238	195	303	166	154	198	124
5	111	134	115	135	219	218	248	281	166	165	182	125
6	105	122	115	135	184	215	331	270	168	151	175	128
7	104	117	125	130	189	217	521	258	170	155	171	128
8	101	122	125	130	193	199	964	249	166	164	171	131
9	105	130	125	129	208	192	972	237	164	185	174	132
10	111	124	120	134	216	190	805	231	171	238	174	126
11	110	121	120	139	227	213	675	237	181	230	164	123
12	106	128	120	142	234	219	550	236	231	226	159	125
13	107	133	110	126	224	223	516	231	275	200	157	129
14	106	132	110	113	236	197	489	222	285	177	152	126
15	106	128	110	110	259	235	533	221	261	170	152	129
16	108	127	105	105	282	307	485	217	239	166	151	124
17	108	132	105	105	274	325	409	206	223	164	156	119
18	115	131	100	105	276	262	309	196	226	163	149	119
19	120	136	100	105	211	250	277	196	208	164	148	125
20	124	136	100	110	201	270	258	140	191	160	155	126
21	127	131	95	120	223	290	249	108	173	157	209	129
22	122	138	95	130	247	307	259	181	163	153	212	135
23	121	134	90	130	290	300	277	177	142	149	161	139
24	121	133	90	140	318	289	278	176	137	150	146	134
25	117	134	95	155	329	272	273	171	141	213	139	134
26	117	135	95	145	332	257	285	179	143	355	133	127
27	118	135	100	138	300	250	282	182	138	294	124	122
28	122	130	100	149	248	248	280	175	136	284	131	122
29	120	130	95	193	230	239	276	167	135	266	133	121
30	120	125	100	223	---	237	297	176	138	242	127	119
31	109	---	110	199	---	232	---	167	---	237	119	---
TOTAL	3502	3889	3350	4185	7192	7619	11968	6740	5456	5948	5082	3800
MEAN	113	130	108	135	248	246	399	217	182	192	164	127
MAX	127	157	125	223	332	325	972	319	285	355	252	139
MIN	101	113	90	105	184	190	195	108	135	134	119	119
AC-FT	6950	7710	6640	8300	14270	15110	23740	13370	10820	11800	10080	7540

CAL YR 1983 TOTAL 65379 MEAN 179 MAX 1430 MIN 90 AC-FT 129700
WTR YR 1984 TOTAL 68731 MEAN 188 MAX 972 MIN 90 AC-FT 136300

06462500 PLUM CREEK AT MEADVILLE, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)
OCT											
06...	1210	112	197	7.2	12.0	80	0	26	3.6	7.1	.4
JUN											
13...	1050	277	204	7.5	21.0	77	0	25	3.5	7.6	.4
JUL											
25...	1100	210	234	7.3	22.0	89	0	29	4.1	8.2	.4

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT										
06...	5.6	94	5.7	1.9	.30	55	160	.22	49	1.0
JUN										
13...	6.6	97	6.5	1.7	.40	42	150	.20	109	1.2
JUL										
25...	5.5	100	6.0	1.6	.40	51	170	.23	94	.65

06463080 LONG PINE CREEK NEAR LONG PINE, NE

LOCATION.--Lat 42°37'55", long 99°40'46", in SE1/4NE1/4 sec.29, T.31 N., R.20 W., Brown County, Hydrologic Unit 10150004, on right bank 4.9 mi upstream from Bone Creek and 7 mi north of Long Pine.

PERIOD OF RECORD.--October 1979 to current year.

REVISED RECORDS.--WRD NE-81-1: 1980(M).

GAGE.--Water-stage recorder. Altitude of gage is 2,080 ft, from topographic map.

REMARKS.--Records good. Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--5 years, 99.8 ft³/s, 72,310 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 507 ft³/s July 16, 1983, gage height, 5.27 ft; minimum daily, 77 ft³/s Sept. 5, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 375 ft³/s Apr. 7, gage height, 3.66 ft from floodmark; minimum daily, 87 ft³/s Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	99	95	99	116	109	112	174	108	97	105	97
2	94	99	95	96	116	114	115	164	106	96	101	98
3	93	100	96	99	112	118	112	153	106	99	100	100
4	96	102	96	100	109	117	114	141	105	99	99	99
5	93	102	96	101	102	110	144	133	103	101	99	98
6	95	101	96	101	102	109	234	133	104	101	99	97
7	97	100	96	100	101	107	331	131	100	103	100	97
8	96	99	95	103	100	105	297	126	98	107	99	98
9	96	103	95	103	103	104	208	120	97	106	97	97
10	97	100	95	99	99	103	197	116	96	110	95	97
11	96	100	94	98	99	107	180	123	98	105	94	96
12	96	102	93	96	97	106	196	115	138	100	97	97
13	98	104	93	96	96	106	188	111	114	99	99	96
14	99	102	93	96	100	147	207	108	104	101	97	97
15	100	100	93	96	108	254	198	108	102	101	98	96
16	100	97	92	96	116	163	178	105	132	100	99	95
17	97	97	91	96	116	133	145	107	118	99	105	95
18	96	96	91	96	112	128	135	106	114	100	103	94
19	99	96	93	96	98	121	135	107	103	100	100	91
20	98	96	96	99	97	126	129	106	96	98	113	88
21	98	96	95	97	101	155	129	106	97	99	117	87
22	97	96	95	99	104	155	140	106	100	98	113	91
23	98	96	95	99	106	138	151	107	96	96	113	93
24	97	96	98	99	110	128	143	102	94	100	111	94
25	97	96	103	96	126	121	143	104	98	148	109	96
26	98	96	97	95	136	120	142	104	96	168	110	95
27	98	96	102	96	123	121	137	114	94	127	107	95
28	98	96	100	115	114	117	131	109	93	112	105	94
29	98	96	97	124	111	115	136	105	92	105	104	95
30	99	95	98	114	---	114	150	105	94	100	100	94
31	100	---	99	120	---	112	---	103	---	104	98	---
TOTAL	3006	2954	2963	3120	3130	3883	4957	3652	3096	3279	3186	2857
MEAN	97.0	98.5	95.6	101	108	125	165	118	103	106	103	95.2
MAX	100	104	103	124	136	254	331	174	138	168	117	100
MIN	92	95	91	95	96	103	112	102	92	96	94	87
AC-FT	5960	5860	5880	6190	6210	7700	9830	7240	6140	6500	632C	5670

CAL YR 1983 TOTAL 37998 MEAN 104 MAX 500 MIN 81 AC-FT 75370
WTR YR 1984 TOTAL 40083 MEAN 110 MAX 331 MIN 87 AC-FT 79500

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE

LOCATION.--Lat 42°41'21", long 99°40'43", in SE1/4NE1/4 sec.5, T.31 N., R.20 W., Brown County, Hydrologic Unit 10150004, on right bank 10 ft downstream from county road bridge, 1 mi downstream from Bone Creek, and 5.5 mi southwest of Riverview.

DRAINAGE AREA.--390 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1948 to January 1954, September 1954 to current year.

REVISED RECORDS.--WSP 1729: 1952(M).

GAGE.--Water-stage recorder. Datum of gage is 1,983.34 ft National Geodetic Vertical Datum of 1929, (levels by Bureau of Reclamation). Prior to Dec. 7, 1962, at site 100 ft upstream at present datum. Dec. 7, 1962, to Sept. 20, 1978, at site 3 ft upstream at present datum.

REMARKS.--Records good except those above 250 ft^3/s, which are poor. Flow includes return water from Ainsworth Irrigation District since 1965.

AVERAGE DISCHARGE.--35 years (1948-53, 1954-84), 142 ft^3/s, 102,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,650 ft^3/s July 1, 1962, gage height, 15.68 ft, backwater from fallen bridge, from rating curve extended above 3,600 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 44 ft^3/s Jan. 10, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 15	0915	633	a4.72	July 26	0500	738	5.23
Apr. 7	unknown	1080	b5.61	Aug. 20	2230	*1160	5.97
Apr. 14	2330	490	4.54				

a Observed
b From floodmark

Minimum daily discharge, 129 ft^3/s Jan. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	174	163	186	240	172	159	315	217	164	237	213
2	159	170	161	168	237	192	150	295	210	185	205	211
3	152	178	165	166	212	224	144	299	207	187	187	207
4	161	175	168	169	200	203	166	249	210	164	202	205
5	150	179	170	176	169	179	248	232	197	157	203	208
6	138	172	164	178	163	176	509	230	204	151	206	214
7	142	172	167	185	162	183	970	219	182	160	210	202
8	142	167	165	185	165	180	804	206	181	188	205	202
9	147	174	169	186	170	200	422	195	179	182	197	194
10	156	170	176	178	172	212	342	196	177	214	181	188
11	153	162	167	178	180	220	318	217	188	193	196	198
12	147	170	164	160	180	221	356	213	289	176	195	199
13	153	175	166	160	163	241	365	199	229	171	192	186
14	156	170	165	155	177	302	427	187	205	164	199	184
15	156	166	158	140	210	327	431	189	201	172	202	174
16	162	160	155	137	261	291	316	188	271	179	213	172
17	164	166	150	129	234	201	261	182	251	177	214	176
18	170	164	145	130	219	195	241	186	260	188	211	177
19	182	166	145	130	157	185	225	204	244	192	209	169
20	180	161	140	135	168	191	200	212	213	185	428	162
21	172	159	140	150	182	245	190	205	200	189	668	163
22	177	163	140	138	195	269	217	182	191	196	299	168
23	170	158	140	139	214	218	262	207	180	190	240	172
24	165	155	140	142	261	182	239	213	171	197	237	172
25	162	155	150	147	335	178	209	216	182	372	227	176
26	161	149	180	152	287	172	214	224	183	539	225	171
27	166	142	250	159	223	172	208	272	158	319	224	158
28	160	134	210	192	175	172	201	245	141	245	217	159
29	156	143	201	361	169	159	221	232	146	222	207	158
30	168	148	191	278	---	159	269	218	147	205	208	158
31	172	---	187	231	---	150	---	212	---	204	217	---
TOTAL	4955	4897	5152	5320	5880	6371	9284	6839	6014	6427	7261	5496
MEAN	160	163	166	172	203	206	309	221	200	207	234	183
MAX	182	179	250	361	335	327	970	315	289	539	668	214
MIN	138	134	140	129	157	150	144	182	141	151	181	158
AC-FT	9830	9710	10220	10550	11660	12640	18410	13570	11930	12750	14400	10900

CAL YR 1983 TOTAL 66743 MEAN 183 MAX 893 MIN 134 AC-FT 132400
WTR YR 1984 TOTAL 73896 MEAN 202 MAX 970 MIN 129 AC-FT 146600

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
OCT									
06...	1420	148	192	7.8	15.5	--	74	0	24
17...	0950	154	194	8.2	7.5	<1	72	0	23
NOV									
17...	1015	165	195	8.2	6.5	15	71	0	23
DEC									
14...	1145	157	194	8.0	1.0	5	74	0	24
JAN									
12...	1150	156	214	8.0	.5	15	76	0	24
FEB									
09...	1110	176	203	8.0	4.0	15	78	0	25
MAR									
07...	1400	177	203	8.0	5.5	5	75	0	24
APR									
06...	1500	588	252	7.9	8.5	880	76	0	24
MAY									
02...	1410	268	239	7.9	11.5	70	88	0	28
JUN									
13...	1455	235	194	8.5	23.0	--	75	0	24
27...	1445	165	185	8.1	23.5	10	74	0	24
JUL									
24...	1405	210	181	8.0	19.5	360	68	0	22
AUG									
22...	1145	297	185	7.6	18.5	29	--	--	--
SEP									
20...	1110	167	192	7.9	15.0	35	74	0	24

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)
OCT									
06...	3.4	7.9	.4	5.6	85	5.2	2.7	.20	54
17...	3.5	7.6	.4	5.2	81	5.1	2.5	.30	53
NOV									
17...	3.4	7.9	.4	5.6	84	5.5	2.6	.30	53
DEC									
14...	3.5	7.5	.4	5.0	83	5.2	2.2	.20	54
JAN									
12...	3.8	8.4	.4	5.9	87	6.5	2.9	.30	53
FEB									
09...	3.7	8.5	.4	5.7	95	7.3	3.0	.30	50
MAR									
07...	3.7	8.7	.5	5.6	99	7.2	3.0	.30	50
APR									
06...	3.9	15	.8	7.6	98	13	5.6	.40	33
MAY									
02...	4.5	15	.7	6.2	109	12	4.2	.40	42
JUN									
13...	3.7	6.3	.3	6.4	85	7.3	2.5	.30	50
27...	3.3	7.3	.4	5.1	86	5.5	1.7	.30	54
JUL									
24...	3.2	7.0	.4	5.4	75	6.0	2.0	.30	48
AUG									
22...	--	--	--	9.9	76	11	3.2	.30	--
SEP									
20...	3.3	7.1	.4	6.3	83	5.9	2.2	.30	53

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	BORON, DISSOLVED (UG/L AS B) (01020)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
OCT									
06...	150	.21	61	1.6	--	--	--	--	--
17...	150	.20	62	1.5	.200	.150	20	18	3
NOV									
17...	150	.21	68	1.8	.220	.160	20	15	1
DEC									
14...	150	.21	64	1.8	.180	.150	20	32	2
JAN									
12...	160	.21	66	1.8	.210	.180	20	52	4
FEB									
09...	160	.22	76	1.7	.260	.170	20	65	3
MAR									
07...	160	.21	75	1.7	.140	.140	20	55	2
APR									
06...	160	.22	257	.53	2.10	.260	10	420	29
MAY									
02...	180	.24	138	1.0	.330	.170	20	82	3
JUN									
13...	150	.21	96	1.5	--	--	--	--	--
27...	150	.21	68	1.2	.220	.160	20	19	3
JUL									
24...	140	.19	79	1.1	.720	.170	20	41	2
AUG									
22...	--	--	--	1.4	--	.540	20	--	--
SEP									
20...	150	.21	68	1.4	.200	.140	30	16	2

06464500 KEYA PAHA RIVER AT WEWELA, SD

LOCATION.--Lat 43°01'42", long 99°46'45", in SE1/4 sec.24, T.95 N., R.76 W., Tripp County, Hydrologic Unit 10150006, on left bank 13 ft downstream from bridge on U.S. Highway 183, 1.0 mi north of Wewela, 4.5 mi upstream from Holt Creek, and 11.5 mi downstream from Lost Creek.

DRAINAGE AREA.--1,070 mi^2, approximately.

PERIOD OF RECORD.--November 1937 to September 1940, October 1947 to current year. Monthly discharge only for October 1947, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 2,049.78 ft National Geodetic Vertical Datum of 1929. Prior to June 21, 1957, nonrecording gage at site 13 ft upstream at same datum.

REMARKS.--Records good except those for winter period, Nov. 26 to Mar. 15, which are poor.

AVERAGE DISCHARGE.--39 years (water years 1939-40, 1948-84), 70.1 ft^3/s, 50,790 acre-ft/yr; median of yearly mean discharges, 58 ft^3/s, 42,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft^3/s Mar. 31, 1952, gage height, 13.08 ft; maximum gage height, 13.5 ft Mar. 25, 1950, from floodmark (backwater from ice); no flow Jan. 10 to Feb. 15, 1949, Aug. 19 to Sept. 14, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 12	1745	ice jam	*4.97	Apr. 30	2015	306	2.71
Mar. 22	1030	283	2.41	May 12	2130	253	2.46
Apr. 8	0145	888	4.34	May 30	0915	394	3.10
Apr. 14	1000	*1120	4.86	June 16	1100	273	a2.67

a Observed

Minimum daily discharge, 23 ft^3/s Aug. 31, Sept. 1-3, 5-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	55	55	70	110	120	185	299	222	50	37	23
2	45	56	55	75	130	100	185	301	175	50	39	23
3	45	60	60	75	120	80	215	285	135	51	38	23
4	47	60	60	77	110	70	239	264	135	51	36	24
5	50	60	55	77	100	65	358	220	117	53	36	23
6	49	60	55	80	100	60	501	214	112	55	35	23
7	47	59	55	80	110	60	630	199	116	52	35	23
8	44	59	57	75	120	80	825	186	115	52	34	24
9	43	65	57	70	150	100	811	177	113	51	32	24
10	42	68	59	60	200	130	567	167	112	57	32	24
11	43	68	59	55	220	110	441	193	117	59	30	26
12	43	68	60	50	200	110	431	216	109	58	29	27
13	43	72	65	50	200	130	543	203	105	53	30	28
14	43	82	60	50	230	200	1020	180	104	50	31	27
15	43	83	60	45	220	300	867	163	117	49	29	28
16	43	77	55	40	210	382	634	147	230	51	32	28
17	43	75	55	35	207	318	481	138	221	51	34	28
18	42	73	50	35	200	189	365	130	117	49	34	28
19	45	71	50	31	190	188	326	125	84	47	33	28
20	55	70	50	30	190	196	286	120	84	45	46	27
21	57	68	45	35	170	265	250	115	81	43	109	26
22	55	67	45	45	200	273	231	109	74	41	42	26
23	52	71	41	55	249	254	225	103	72	38	33	28
24	51	65	45	60	249	235	210	99	68	36	32	30
25	50	66	50	60	230	219	195	103	62	41	32	32
26	49	65	50	65	180	205	208	105	64	117	29	34
27	49	60	55	65	170	212	231	226	57	70	28	34
28	50	60	50	70	160	214	227	332	55	44	27	36
29	50	60	60	70	150	205	229	333	50	42	26	37
30	52	55	65	80	---	196	288	287	50	40	25	37
31	54	---	65	100	---	192	---	238	---	38	23	---
TOTAL	1469	1978	1713	1865	5075	5458	12204	5977	3273	1584	1088	829
MEAN	47.4	65.9	55.3	60.2	175	176	407	193	109	51.1	35.1	27.6
MAX	57	83	65	100	249	382	1020	333	230	117	109	37
MIN	42	55	41	30	100	60	185	99	50	36	23	23
AC-FT	2910	3920	3400	3700	10070	10830	24210	11860	6490	3140	2160	1640

CAL YR 1983 TOTAL 48327 MEAN 132 MAX 1120 MIN 31 AC-FT 95860
WTR YR 1984 TOTAL 42513 MEAN 116 MAX 1020 MIN 23 AC-FT 84320

06464900 KEYA PAHA RIVER NEAR NAPER, NE

LOCATION.--Lat 42°55'00", long 99°05'50", in SE1/4SE1/4 sec.17, T.34 N., R.15 W., Boyd County, Hydrologic Unit 10150006, on left bank 70 ft upstream from highway bridge, 3.3 mi south of Naper, and 8.6 mi upstream from mouth.

DRAINAGE AREA.--1,630 mi^2, approximately.

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 1709: 1959(M).

GAGE.--Water-stage recorder. Altitude of gage is 1,680 ft, from topographic map. Prior to May 2, 1958, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--27 years, 135 ft^3/s, 97,810 acre-ft/yr; median of yearly mean discharges, 119 ft^3/s, 86,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,280 ft^3/s July 1, 1962, gage height, 10.91 ft; maximum gage height, 13.34 ft Mar. 23, 1960, backwater from ice; no flow July 22-30, Aug. 10, 11, 1976, Aug. 3, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 11	----	2000	a*9.98	June 6	0700	1140	7.28
Apr. 8	0900	2560	8.04	June 12	0330	1430	7.51
Apr. 14	1900	*2770	8.16				

a Ice jam

Minimum daily discharge, 55 ft^3/s Sept. 6, 7, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	101	100	100	180	307	379	519	511	103	88	57
2	78	99	106	100	180	355	410	432	387	102	89	59
3	80	98	110	100	190	350	640	417	340	106	85	57
4	85	101	112	105	190	344	717	368	314	112	86	58
5	89	105	110	105	160	297	1020	326	284	107	81	56
6	90	104	110	110	180	246	1310	302	514	103	76	55
7	89	107	108	115	190	208	1660	257	450	94	76	55
8	88	108	106	110	210	210	2390	224	403	101	74	59
9	86	126	108	100	230	220	1710	219	346	111	68	57
10	88	124	110	95	270	230	1240	286	300	252	67	63
11	90	125	110	90	300	250	1060	454	287	200	67	66
12	90	136	120	80	330	290	1160	524	863	147	67	66
13	90	141	120	70	320	350	1660	524	515	127	67	63
14	88	148	114	65	320	500	2350	451	489	123	69	63
15	88	154	110	65	300	1430	2090	358	459	115	69	64
16	88	159	104	60	300	1000	1270	314	465	104	69	63
17	90	155	100	56	300	622	881	282	697	98	69	65
18	100	150	100	56	290	484	690	257	472	88	70	64
19	120	145	100	58	280	414	570	267	372	87	70	63
20	130	132	90	60	280	437	485	229	281	87	78	58
21	140	129	80	66	270	680	436	207	233	83	149	56
22	140	146	76	70	300	687	429	202	207	80	134	56
23	110	145	74	75	350	604	395	194	182	72	99	55
24	106	152	72	80	400	561	381	185	157	65	85	62
25	101	146	74	95	390	519	372	176	156	81	82	69
26	106	126	74	100	370	482	344	183	150	195	79	69
27	106	110	78	110	350	488	330	445	139	133	76	70
28	101	100	84	130	350	467	315	544	131	111	76	74
29	97	100	90	140	287	415	351	374	121	92	67	75
30	97	100	92	150	---	394	528	347	110	94	64	76
31	97	---	94	170	---	378	---	442	---	90	61	---
TOTAL	3026	3772	3036	2886	8067	14219	27573	10309	10335	3463	2457	1873
MEAN	97.6	126	97.9	93.1	278	459	919	333	345	112	79.3	62.4
MAX	140	159	120	170	400	1430	2390	544	863	252	149	76
MIN	78	98	72	56	160	208	315	176	110	65	61	55
AC-FT	6000	7480	6020	5720	16000	28200	54690	20450	20500	6870	4870	3720

CAL YR 1983 TOTAL 96589 MEAN 265 MAX 2980 MIN 67 AC-FT 191600
WTR YR 1984 TOTAL 91016 MEAN 249 MAX 2390 MIN 55 AC-FT 180500

06465000 NIOBRARA RIVER NEAR SPENCER, NE

LOCATION.--Lat 42°48'33", long 98°39'22", in SE1/4NW1/4 sec.30, T.33 N., R.11 W., Boyd County, Hydrologic Unit 10150007, at Spencer powerplant dam 5 mi southeast of Spencer.

DRAINAGE AREA.--12,100 mi^2, approximately.

PERIOD OF RECORD.--May to December 1908 (gage heights only); August 1913 to September 1914; October to December 1914, April to September 1915 (gage heights only); August 1927 to September 1936, June 1940 to current year. Published as "near Lynch" 1913-15. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WDR NE-67: Drainage area.

GAGE.--Water-stage recorder and hourly log and powerplant operation. Datum of gage is 1,473.67 ft National Geodetic Vertical Datum of 1929. Elevation of taintor gate sill, 1,491.12 ft National Geodetic Vertical Datum of 1929. Prior to December 1908, nonrecording gage on former highway bridge 275 ft downstream and Aug. 1, 1913, to Sept. 30, 1915, nonrecording gage at highway bridge 10 mi downstream at different datums. Aug. 1, 1927, to Sept. 30, 1936, and June 14, 1940, to Sept. 30, 1944, discharge computed as flow through powerhouse and over dam. Oct. 1, 1944, to Nov. 10, 1954, water-stage recorder at site 275 ft downstream at datum 4.98 ft higher, and Nov. 11, 1954, to Sept. 30, 1957, at site 0.3 mi downstream at datum 9.78 ft lower. Oct. 1, 1957 to Oct. 21, 1958, discharge computed as flow through powerhouse and over dam. Oct. 28, 1958, to Aug. 13, 1963, water-stage recorder at site 225 ft downstream at present datum. Aug. 14, 1963, gage moved to present site with discharge computed as flow through powerhouse and over dam.

REMARKS.--Records good. Natural flow of stream affected by irrigation and power developments. Daily discharge determined from flow through turbines and taintor gates, computed from relation between discharge, head, and gage openings.

COOPERATION.--Powerplant log furnished by Nebraska Public Power District.

AVERAGE DISCHARGE.--54 years (1913-14, 1927-36, 1940-84), 1,414 ft^3/s, 1,024,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft^3/s Mar. 12, 1955, gage height, 12.16 ft, site and datum then in use; minimum daily, 5 ft^3/s Nov. 14, Dec. 18, 19, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 7,000 ft^3/s Apr. 8; minimum daily, 200 ft^3/s Nov. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1270	1400	516	1490	2790	2400	2490	3190	2170	1200	1460	959
2	1400	1530	922	1410	2860	3710	2640	2900	2240	1180	1430	1100
3	1390	1290	1280	1400	2710	3440	3510	2840	1720	1130	1450	1030
4	1450	1120	1400	1500	2820	1260	3390	2770	1880	1440	1460	978
5	1540	1380	1490	1790	2470	3310	3360	2640	2010	1290	1400	988
6	1430	1400	1630	1950	2430	2290	3650	2700	2880	1380	1230	956
7	1380	1340	1700	1940	2400	1600	4460	2580	2860	1230	1170	993
8	1400	1120	1630	1940	2400	1480	7000	2380	2650	1290	1240	1140
9	1380	1710	1580	1910	2480	1080	6960	3580	2250	1430	1160	1080
10	1180	1890	1580	1830	2610	1750	5020	2530	2170	2080	1120	1170
11	1240	1690	1670	1840	2650	1840	4250	2400	2130	2090	1050	1170
12	1250	1740	1700	1910	2550	1980	4350	2580	3100	1860	1010	1100
13	1260	1840	1720	1800	2490	2210	4580	2510	3100	1560	970	1070
14	1220	1740	1600	1710	2550	3340	4750	2310	2570	1410	953	1170
15	1250	1530	1600	1710	2740	3960	4550	2210	2300	1430	996	1250
16	1240	1620	1560	1610	2940	3030	4520	2130	2550	1300	1160	1110
17	1230	1710	1450	1580	3120	2310	4110	1970	2850	1270	1210	1580
18	1330	1760	1280	1550	2880	2610	3980	1960	2760	1140	1150	1770
19	1540	1810	1120	1470	2150	2590	4550	2130	2340	1180	1110	1660
20	1540	1790	976	1420	2520	2640	2560	2000	2210	1080	1300	1690
21	1480	1760	920	1280	2630	3100	2680	1930	2040	1030	2700	1470
22	1450	1780	866	1280	2680	3410	2900	1880	1850	1020	1960	1420
23	1430	1580	848	1340	3030	3510	2670	1790	1750	969	1500	1460
24	1340	1560	764	1510	3310	3060	2450	1650	1710	1010	1280	1300
25	1310	1390	903	1660	3000	3220	2400	1590	2100	1230	1170	1330
26	1280	1650	1040	1740	2940	3620	2620	1600	1930	2860	1080	1220
27	1270	1080	1130	1890	2850	2990	2730	2420	1680	3090	1100	1220
28	1280	340	1340	2120	2620	2780	2540	3260	1470	2320	1050	1200
29	1290	200	1400	2260	2290	2740	2590	2620	1230	1780	1020	1220
30	1360	400	1420	2440	---	2640	3340	2210	1290	1540	1040	1180
31	1330	---	1440	2650	---	2520	---	1940	---	1480	1020	---
TOTAL	41740	43150	40475	53930	77910	82420	111600	73200	65790	46299	38949	35984
MEAN	1346	1438	1306	1740	2687	2659	3720	2361	2193	1494	1256	1233
MAX	1540	1890	1720	2650	3310	3960	7000	3580	3100	3090	2700	1770
MIN	1180	200	516	1280	2150	1080	2400	1590	1230	969	953	956
AC-FT	82790	85590	80280	107000	154500	163500	221400	145200	130500	91830	77260	73360

CAL YR 1983 TOTAL 679013 MEAN 1860 MAX 6660 MIN 200 AC-FT 1347000
WTR YR 1984 TOTAL 712447 MEAN 1947 MAX 7000 MIN 200 AC-FT 1413000

06465310 EAGLE CREEK NEAR REDBIRD, NE

LOCATION.--Lat 42°45'51", long 98°34'13" in SE1/4NW1/4 sec.11, T.32 N., R.11 W., Holt County, Hydrologic Unit 10150007, on left bank 12 ft downstream from bridge on the county road, 7 mi west of Redbird.

DRAINAGE AREA.--206 mi^2.

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,463.90 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--6 years, 50.8 ft^3/s, 36,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,330 ft^3/s Aug. 5, 1981, gage height, 8.55 ft; minimum daily, 1.9 ft^3/s Aug. 7, 8, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 549 ft^3/s June 25, gage height, 5.95 ft; minimum daily, 20 ft^3/s Nov. 28, Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	49	58	62	66	55	110	231	87	44	42	41
2	43	51	60	62	70	59	136	179	88	46	41	45
3	43	52	60	62	75	62	194	144	84	46	41	44
4	43	51	58	63	80	63	199	124	90	42	51	45
5	43	50	56	62	90	57	195	116	117	44	52	44
6	37	49	56	64	110	59	184	142	140	55	48	42
7	37	48	58	66	151	47	229	140	91	47	43	40
8	37	50	60	66	123	46	237	117	80	45	40	41
9	37	61	60	64	125	53	169	106	77	58	33	42
10	36	48	60	62	123	61	142	106	76	103	32	51
11	36	45	58	60	104	61	181	128	77	75	30	53
12	32	47	58	58	99	59	237	127	118	56	26	54
13	30	54	62	56	89	58	250	113	92	48	25	50
14	34	59	64	54	75	105	225	103	73	43	20	46
15	37	51	64	52	92	171	153	118	68	46	23	45
16	39	43	64	50	96	106	123	108	84	46	35	44
17	41	46	62	49	78	99	113	99	120	45	42	43
18	47	46	60	47	65	91	111	97	100	42	42	42
19	57	62	57	46	86	75	107	97	78	38	41	42
20	53	52	56	45	80	83	103	92	68	38	80	39
21	51	45	56	45	79	102	111	88	66	32	192	37
22	51	44	54	45	73	115	189	93	65	32	104	37
23	49	40	54	45	67	129	136	85	66	30	71	38
24	51	37	52	45	67	168	110	82	59	58	72	41
25	47	39	52	49	65	222	107	83	283	90	59	44
26	47	37	52	52	63	180	112	88	114	120	58	45
27	49	22	52	54	58	146	102	170	71	89	55	46
28	47	20	50	56	52	127	93	154	62	65	49	48
29	43	50	54	58	45	119	139	110	53	59	45	51
30	47	54	58	60	---	112	241	95	48	52	41	55
31	49	---	62	64	---	109	---	88	---	47	37	---
TOTAL	1334	1402	1787	1723	2446	2999	4738	3623	2695	1681	1570	1335
MEAN	43.0	46.7	57.6	55.6	84.3	96.7	158	117	89.8	54.2	50.6	44.5
MAX	57	62	64	66	151	222	250	231	283	120	192	55
MIN	30	20	50	45	45	46	93	82	48	30	20	37
AC-FT	2650	2780	3540	3420	4850	5950	9400	7190	5350	3330	3110	2650

CAL YR 1983 TOTAL 22376 MEAN 61.3 MAX 603 MIN 20 AC-FT 44380
WTR YR 1984 TOTAL 27333 MEAN 74.7 MAX 283 MIN 20 AC-FT 54220

06465440 REDBIRD CREEK AT REDBIRD, NE

LOCATION.--Lat 42°45'43", long 98°26'32", in NE1/4 sec.11, T.32 N., R.10 W., Holt County, Hydrologic Unit 10150007, on right bank 10 ft downstream from county road bridge at Redbird, 0.9 mi upstream from mouth and 4.6 mi south-southeast of Lynch.

DRAINAGE AREA.--157 mi².

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,411.75 ft, National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1982 at datum 1.00 ft higher.

REMARKS.--Records good except those for winter period, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 545 ft³/s May 29, 1982, gage height, 5.31 ft, current datum; maximum gage height, 5.87 ft, current datum, Feb. 21, 1982, backwater from ice, but may have been higher during period of no gage-height record Jan. 10 to Feb. 10, 1982; minimum daily discharge, 3.8 ft³/s July 14, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 352 ft³/s Apr. 30, gage height, 3.13 ft, from floodmark; maximum gage height, 4.72 ft Feb. 19, from floodmark, backwater from ice; minimum daily discharge, 20 ft³/s July 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	33	40	38	52	46	73	202	61	37	35	28
2	26	34	40	39	56	52	84	157	62	34	43	32
3	27	41	40	39	60	55	260	121	58	33	43	30
4	28	43	40	38	66	52	246	95	56	33	49	28
5	28	41	38	38	70	43	239	87	56	33	55	27
6	26	36	37	38	85	40	204	125	59	42	44	29
7	26	36	37	39	116	35	201	114	57	39	37	31
8	26	35	37	40	100	24	236	89	57	40	32	33
9	27	40	37	38	94	28	167	100	59	42	27	33
10	28	37	38	36	90	34	132	93	67	60	25	34
11	28	36	36	35	82	37	150	112	65	67	24	37
12	27	38	35	34	72	35	218	108	86	49	22	37
13	27	42	36	34	63	35	218	127	83	39	23	33
14	27	49	38	34	60	61	192	98	68	31	22	33
15	28	46	38	33	73	131	164	94	59	33	26	35
16	29	41	37	32	94	98	113	94	70	31	32	33
17	30	40	36	32	102	64	93	88	108	29	31	33
18	32	39	35	32	90	59	83	86	91	26	30	32
19	36	50	35	31	74	54	80	83	72	26	30	31
20	36	54	34	30	66	60	75	79	58	26	42	29
21	35	46	34	30	70	83	75	74	53	24	108	28
22	35	40	35	30	61	107	149	75	50	21	86	28
23	35	37	34	31	61	116	120	71	50	20	67	28
24	34	37	33	33	64	131	94	67	44	34	67	31
25	32	37	33	34	68	148	83	68	51	70	51	35
26	31	37	33	36	68	135	84	68	56	105	43	33
27	31	33	32	38	63	120	87	112	61	93	38	34
28	30	30	31	40	52	98	75	118	52	68	34	35
29	29	35	32	43	43	95	123	94	44	54	30	34
30	30	38	33	45	---	83	215	78	39	42	28	35
31	32	---	35	48	---	77	---	68	---	38	28	---
TOTAL	923	1181	1109	1118	2115	2236	4333	3045	1852	1319	1252	959
MEAN	29.8	39.4	35.8	36.1	72.9	72.1	144	98.2	61.7	42.5	40.4	32.0
MAX	36	54	40	48	116	148	260	202	108	105	108	37
MIN	26	30	31	30	43	24	73	67	39	20	22	27
AC-FT	1830	2340	2200	2220	4200	4440	8590	6040	3670	2620	2480	1900

CAL YR 1983	TOTAL	17254	MEAN	47.3	MAX	250	MIN	15	AC-FT	34220
WTR YR 1984	TOTAL	21442	MEAN	58.6	MAX	260	MIN	20	AC-FT	42530

06465500 NIOBRARA RIVER NEAR VERDEL, NE
National stream-quality accounting network station

LOCATION.--Lat 42°44'25", long 98°12'45", near center of N1/2 sec.23, T.32 N., R.8 W., Knox County, Hydrologic Unit 10150007, on left bank 4 ft downstream from Pishelville Bridge, 6 mi south of Verdel, and 7 mi upstream from Verdigre Creek.

DRAINAGE AREA.--12,600 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to May 1940, June 1958 to current year.

REVISED RECORDS.--WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,308.12 ft National Geodetic Vertical Datum of 1929. Apr. 25, 1938, to June 16, 1939, nonrecording gage at same site and datum. June 17, 1939, to June 13, 1940, nonrecording gage 250 ft downstream at present datum.

REMARKS.--Records fair. Natural flow of stream affected by irrigation and power developments.

AVERAGE DISCHARGE.--27 years, 1,554 ft³/s, 1,126,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft³/s Mar. 27, 1960, gage height, 10.10 ft; maximum gage height, 10.62 ft Mar. 12, 1966, backwater from ice; minimum daily discharge, 104 ft³/s Nov. 30, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 7,790 ft³/s Apr. 9; maximum gage height, 7.01 ft Feb. 2, backwater from ice; minimum daily discharge, 317 ft³/s Nov. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1790	1450	615	1590	2930	2400	2740	3870	2220	1320	1620	1060
2	1460	1690	923	1580	3030	3100	2790	3420	2550	1310	1500	1180
3	1500	1430	1340	1520	2920	4360	3910	3210	2060	1240	1580	1140
4	1510	1230	1530	1630	3020	1940	4150	3120	2010	1470	1590	1090
5	1640	1490	1570	1790	2790	2870	3880	2950	2090	1380	1540	1100
6	1560	1530	1710	2100	2720	2750	4070	3040	2920	1520	1410	1060
7	1490	1500	1820	2080	2780	1830	4640	3010	2940	1410	1290	1060
8	1460	1240	1810	2090	2710	1560	6720	2730	3100	1380	1330	1210
9	1500	1600	1700	2100	2720	1310	7790	2580	2540	1480	1270	1200
10	1320	2120	1720	1950	2870	1570	6150	4060	2410	2150	1230	1200
11	1300	1790	1770	1970	2930	2060	4740	2720	2300	2400	1150	1370
12	1320	1830	1830	2040	2830	2080	4990	2840	2910	2090	1090	1240
13	1350	1960	1860	1960	2700	2160	5150	2930	3620	1760	1050	1170
14	1310	1950	1780	1910	2700	2980	5200	2610	2870	1470	1020	1240
15	1330	1650	1740	1780	2920	4560	5240	2540	2560	1570	1000	1360
16	1330	1780	1710	1760	3110	3740	4680	2470	2620	1420	1220	1250
17	1340	1770	1650	1690	3320	2570	4330	2290	3030	1400	1320	1470
18	1370	1900	1460	1670	3340	2740	4760	2210	3140	1240	1260	1880
19	1610	1960	1310	1600	2360	2810	4990	2330	2710	1260	1220	1830
20	1660	1940	1160	1540	2680	2700	2840	2270	2420	1200	1300	1690
21	1640	1890	1040	1430	2810	3270	2870	2230	2230	1120	2810	1730
22	1570	1880	1010	1360	2820	3610	3390	2060	2140	1110	2490	1450
23	1550	1710	972	1410	3080	3920	3140	2040	1930	1040	1810	1520
24	1520	1740	923	1560	3480	3630	2770	1920	1870	1120	1530	1510
25	1400	1430	951	1740	3250	3690	2640	1800	2370	1320	1350	1410
26	1410	1730	1120	1830	3160	3870	2820	1780	2270	2420	1250	1390
27	1380	1610	1220	1960	3080	3630	2960	2360	1970	3770	1210	1310
28	1370	318	1370	2180	2780	3090	2890	3620	1660	2700	1200	1310
29	1360	317	1510	2340	2560	3070	2720	3110	1460	2020	1130	1370
30	1480	467	1550	2520	---	2940	3900	2540	1340	1770	1130	1310
31	1460	---	1570	2740	---	2820	---	2270	---	1550	1120	---
TOTAL	45290	46902	44244	57420	84400	89630	123860	82930	72260	50410	43020	40110
MEAN	1461	1563	1427	1852	2910	2891	4129	2675	2409	1626	1388	1337
MAX	1790	2120	1860	2740	3480	4560	7790	4060	3620	3770	2810	1880
MIN	1300	317	615	1360	2360	1310	2640	1780	1340	1040	1000	1060
AC-FT	89830	93030	87760	113900	167400	177800	245700	164500	143300	99990	85330	79560

CAL YR 1983 TOTAL 734414 MEAN 2012 MAX 7400 MIN 317 AC-FT 1457000
WTR YR 1984 TOTAL 780476 MEAN 2132 MAX 7790 MIN 317 AC-FT 1548000

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-65, 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1975 to September 1980.
WATER TEMPERATURES: June 1958 to September 1965, October 1966 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1981.

INSTRUMENTATION.--Temperature recorder since June 14, 1958.

REMARKS.--Prior to July 1, 1971, sediment records were obtained by U.S. Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 470 micromhos Dec. 22, 1976; minimum daily, 110 micromhos Nov. 22, 1976.
WATER TEMPERATURES: Maximum, 38.0°C July 22, 1964, July 20, 1974; minimum, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily, 12,000 mg/L June 8, 1975; minimum daily, 50 mg/L Dec. 31, Jan. 1, 3, 5, 6, 1978.
SEDIMENT LOADS: Maximum daily, 423,000 tons Mar. 19, 1979; minimum daily, 60 tons Dec. 7, 1972.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 33.5°C June 22, July 22; minimum, 0.5°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT											
04...	1350	1650	256	8.2	17.5	719	--	9.7	30	170	300
NOV											
01...	1330	2050	276	7.8	16.0	723	90	9.1	44	420	1700
DEC											
13...	1405	1510	286	7.6	.5	718	--	13.8	19	81	360
JAN											
24...	1240	1530	321	7.4	.5	718	--	11.4	15	K41	120
MAR											
21...	1010	3780	317	8.0	.5	718	240	13.0	55	K56	800
APR											
17...	1330	4190	400	7.9	16.0	723	--	9.5	74	69	520
MAY											
16...	1400	2480	377	8.2	24.0	721	50	8.0	42	230	210
JUN											
05...	0845	1910	366	8.1	19.0	712	--	8.6	51	490	160
JUL											
10...	1035	2330	268	8.1	23.5	721	--	7.1	90	K5600	K31000
AUG											
07...	1415	1380	263	8.5	27.5	720	32	8.7	220	140	120
SEP											
11...	1350	1480	253	8.5	24.0	720	--	8.7	90	170	140

K Results based on colony count outside the acceptable range (non-ideal colony count).

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)
OCT 04...	100	--	32	5.0	9.7	.4	--	--	13	2.1
NOV 01...	110	0	36	5.4	10	.4	4.6	123	17	2.3
DEC 13...	130	--	41	5.9	10	.4	--	--	19	2.4
JAN 24...	140	--	44	6.7	12	.5	--	--	22	2.5
MAR 21...	130	2	40	6.8	12	.5	6.6	126	36	2.6
APR 17...	160	--	50	9.3	18	.6	--	--	52	4.2
MAY 16...	160	21	50	9.0	16	.6	9.4	142	51	3.4
JUN 05...	150	--	45	9.0	15	.6	--	--	51	2.8
JUL 10...	110	--	34	5.7	10	.4	--	--	28	2.3
AUG 07...	110	0	37	5.4	12	.5	7.8	122	19	2.4
SEP 11...	110	--	36	5.5	10	.4	--	--	16	2.1

DATE	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 04...	--	--	--	--	--	--	188	--	--	.80
NOV 01...	.30	46	205	200	.28	1130	464	.98	.020	1.0
DEC 13...	--	--	--	--	--	--	54	--	--	1.2
JAN 24...	--	--	--	--	--	--	19	--	--	1.3
MAR 21...	.40	37	228	220	.31	2330	632	.78	.020	.80
APR 17...	--	--	--	--	--	--	532	--	--	.70
MAY 16...	.50	42	281	270	.38	1880	212	.49	.010	.50
JUN 05...	--	--	--	--	--	--	116	--	--	.20
JUL 10...	--	--	--	--	--	--	688	--	--	.10
AUG 07...	.50	50	203	210	.28	756	93	--	.040	<.10
SEP 11...	--	--	--	--	--	--	43	--	--	.20

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 04...	--	.060	--	1.2	1.3	2.1	.230	--	--	7.6
NOV 01...	.98	.080	.080	1.7	1.8	2.8	.460	.070	.070	11
DEC 13...	--	.030	--	.67	.70	1.9	.160	--	--	2.9
JAN 24...	--	.080	--	.32	.40	1.7	.140	--	--	3.0
MAR 21...	.84	.080	--	1.9	2.0	2.8	.520	.070	.070	15
APR 17...	--	.180	--	2.3	2.5	3.2	1.00	--	--	22
MAY 16...	.53	.050	.060	.25	.30	.80	.180	.070	.050	6.2
JUN 05...	--	.060	--	1.3	1.4	1.6	.220	--	--	7.5
JUL 10...	--	.040	--	4.0	4.0	4.1	.500	--	--	23
AUG 07...	<.10	.040	.030	1.5	1.5	--	.220	.010	<.010	9.9
SEP 11...	--	.020	--	1.1	1.1	1.3	.190	--	--	6.7

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)
NOV 01...	1330	30	7	5	300	94	<.5	1	<1	<10	<1
MAR 21...	1010	50	7	3	400	110	.5	1	<1	30	<1
MAY 16...	1400	30	6	4	100	130	<1.0	<1	<1	<10	<1
AUG 07...	1415	30	6	6	--	82	<1.0	<1	<1	<10	5

DATE	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)
NOV 01...	<3	13	2	7500	14	7	<1	19	490	2	<.1
MAR 21...	<3	23	3	--	58	8	<1	20	1000	18	.7
MAY 16...	<3	10	2	5800	24	2	<1	29	310	4	.3
AUG 07...	<3	5	3	2600	26	6	<1	16	260	3	1.2

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV											
01...	<.1	<10	2	2	1	<1	<1	210	9	40	6
MAR											
21...	--	<10	1	5	1	<1	<1	220	<6	70	9
MAY											
16...	<.1	<10	<1	3	2	<1	<1	290	10	40	13
AUG											
07...	.6	<10	5	2	3	<1	<1	200	14	20	4

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
NOV							
01...	1330	2050	16.0	1710	9460	12	13
MAR							
21...	1010	3780	.5	3000	30600	13	13
MAY							
16...	1400	2480	24.0	1480	9910	8	9
AUG							
07...	1415	1380	27.5	1320	4920	5	6

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
NOV							
01...	14	19	35	40	70	98	100
MAR							
21...	15	17	27	37	75	93	96
MAY							
16...	9	11	17	30	78	98	100
AUG							
07...	--	7	10	15	59	94	99

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.0	17.0	15.5	11.0	1.0	.5	.5	.5	.5	.5	.5	.5
2	19.5	16.0	13.5	12.0	1.0	.5	1.0	.5	.5	.5	.5	.5
3	20.5	15.5	12.0	11.0	1.0	.5	.5	.5	1.0	.5	.5	.5
4	18.5	15.0	11.0	9.5	.5	.5	.5	.5	.5	.5	.5	.5
5	17.0	12.0	11.5	9.5	.5	.5	.5	.5	1.0	.5	.5	.5
6	17.0	11.5	14.0	10.0	.5	.5	.5	.5	1.0	.5	.5	.5
7	19.5	13.5	14.0	9.5	.5	.5	.5	.5	.5	.5	1.0	.5
8	17.0	11.0	10.5	5.5	.5	.5	.5	.5	.5	.5	1.0	.5
9	14.5	11.0	5.5	3.5	.5	.5	.5	.5	.5	.5	1.0	.5
10	17.0	13.5	5.5	2.0	.5	.5	1.0	.5	.5	.5	1.0	.5
11	15.5	11.5	4.5	2.0	.5	.5	.5	.5	.5	.5	1.0	.5
12	13.0	8.0	3.0	1.0	.5	.5	1.0	.5	.5	.5	1.0	.5
13	12.0	6.5	5.0	2.0	.5	.5	1.0	1.0	.5	.5	.5	.5
14	11.0	5.5	6.5	3.5	.5	.5	1.0	1.0	.5	.5	.5	.5
15	14.0	8.5	8.0	4.5	.5	.5	1.0	.5	.5	.5	1.0	.5
16	14.5	8.0	4.5	3.5	1.0	.5	1.0	1.0	.5	.5	1.0	1.0
17	14.5	8.5	5.5	3.5	1.0	1.0	1.0	1.0	.5	.5	1.0	1.0
18	11.5	10.0	6.5	5.5	1.0	1.0	1.5	1.0	.5	.5	1.0	1.0
19	12.0	11.0	6.0	5.0	1.0	1.0	1.5	1.0	.5	.5	1.0	1.0
20	11.0	10.5	5.0	4.0	1.0	1.0	1.5	1.0	.5	.5	3.0	1.0
21	10.5	9.5	5.0	5.0	1.5	1.0	1.0	.5	.5	.5	1.5	.5
22	11.5	10.0	4.5	4.0	1.5	1.0	.5	.5	.5	.5	3.0	.5
23	14.5	9.0	4.0	4.0	1.5	1.0	1.0	.5	.5	.5	4.0	.5
24	14.5	10.5	4.0	.5	1.5	1.0	.5	.5	.5	.5	6.0	1.5
25	13.0	8.5	1.0	.5	2.0	1.5	.5	.5	.5	.5	8.0	4.0
26	14.0	9.5	1.0	.5	1.5	1.0	.5	.5	.5	.5	8.0	5.5
27	15.5	9.5	.5	.5	1.0	1.0	.5	.5	.5	.5	5.5	5.0
28	14.0	10.0	.5	.5	1.5	1.0	.5	.5	.5	.5	5.5	4.0
29	11.0	8.0	.5	.5	1.5	1.0	.5	.5	.5	.5	6.5	3.5
30	12.0	7.0	1.0	.5	1.5	.5	.5	.5	---	---	8.0	4.5
31	13.0	10.0	---	---	1.0	.5	.5	.5	---	---	9.0	4.5
MONTH	20.5	5.5	15.5	.5	2.0	.5	1.5	.5	1.0	.5	9.0	.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	6.0	11.5	8.0	24.0	18.0	28.5	22.0	28.5	25.0	25.5	21.5
2	6.5	4.5	11.5	9.5	24.0	15.0	30.0	21.5	29.0	25.5	25.5	19.5
3	4.5	3.0	13.5	10.5	24.0	16.0	29.0	23.0	28.5	26.0	24.0	19.0
4	6.0	3.5	16.0	11.0	24.5	19.5	31.0	23.0	28.5	25.5	24.5	19.0
5	11.5	6.0	15.0	10.5	25.0	19.5	27.0	23.5	31.0	26.5	23.0	17.0
6	12.0	8.0	11.5	11.0	25.0	20.0	28.5	21.0	33.0	27.0	25.5	17.0
7	10.0	8.5	13.5	9.5	24.0	20.5	25.0	20.5	30.5	26.0	23.5	18.0
8	8.5	8.0	15.5	9.5	26.0	18.0	30.0	21.0	30.0	25.0	22.0	15.0
9	8.0	8.0	17.0	9.5	22.0	19.5	31.5	24.0	28.5	25.0	25.0	17.0
10	9.0	8.0	19.5	13.5	23.0	16.5	29.0	24.5	30.0	24.0	21.5	19.0
11	9.5	9.0	22.0	15.5	20.5	16.0	31.0	22.0	30.0	23.5	21.5	16.5
12	9.5	7.0	21.5	16.5	23.0	19.0	30.5	23.5	31.5	24.0	27.0	18.5
13	8.0	6.5	22.0	16.5	27.0	21.0	30.5	22.0	29.5	24.5	24.5	21.0
14	10.5	6.5	21.0	16.0	29.5	21.5	26.0	23.5	28.0	24.0	20.5	16.5
15	13.0	9.0	20.0	16.0	29.5	21.5	31.0	22.0	26.0	24.0	20.5	14.0
16	14.5	9.5	24.0	17.0	31.5	24.0	31.0	23.5	25.0	24.0	17.0	13.5
17	15.0	10.5	23.0	19.0	29.5	23.5	30.0	22.0	27.0	23.5	22.0	13.5
18	15.5	10.5	22.0	18.0	30.0	20.5	30.0	21.5	30.0	24.0	28.0	16.0
19	16.0	11.0	24.5	19.0	29.5	22.0	32.0	24.0	29.5	22.0	26.0	19.0
20	13.5	10.5	24.0	18.5	30.0	21.5	33.0	24.0	25.5	21.5	23.5	19.5
21	10.5	8.5	22.0	18.5	30.0	23.0	31.5	24.5	27.0	22.0	23.0	17.0
22	10.0	7.0	20.5	17.0	33.5	23.5	33.5	23.0	28.0	21.5	21.5	18.5
23	14.0	8.0	23.0	14.5	28.5	23.5	32.0	24.5	26.0	19.5	19.5	13.5
24	16.5	10.5	23.0	17.0	29.5	19.5	28.5	23.5	25.0	19.0	13.5	5.0
25	14.0	11.5	21.5	16.0	31.5	23.0	27.0	23.0	28.5	20.0	12.0	8.5
26	18.0	12.0	21.0	15.0	31.0	23.5	28.5	23.0	30.5	23.0	10.5	8.5
27	14.0	6.0	17.0	13.0	30.5	22.0	31.0	23.0	33.0	23.0	11.0	9.0
28	13.0	5.0	19.5	11.5	31.0	23.5	29.5	23.5	33.0	24.0	11.5	8.5
29	10.5	5.0	22.0	14.5	27.0	24.0	28.0	23.5	30.0	24.0	14.0	8.0
30	10.5	5.0	23.0	16.0	29.5	21.0	27.0	23.0	28.5	20.5	16.0	9.0
31	---	---	26.0	17.0	---	---	26.5	24.5	28.0	19.5	---	---
MONTH	18.0	3.0	26.0	8.0	33.5	15.0	33.5	20.5	33.0	19.0	28.0	5.0

06465680 NORTH BRANCH VERDIGRE CREEK NEAR VERDIGRE, NE

LOCATION.--Lat 42°35'51", long 98°08'03", in SE1/4SE1/4 sec.4, T.30 N., R.7 W., Knox County, Hydrologic Unit 10150007, on right bank 15 ft downstream from bridge on paved county road 5 mi west of Verdigre.

DRAINAGE AREA.--137 mi².

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,466.06 ft. National Geodetic Vertical Datum of 1929 (levels by Nebraska Natural Resources Commission).

REMARKS.--Records good except those for winter period, which are poor. Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--5 years, 24.4 ft³/s, 17,680 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 220 ft³/s June 14, 1981, gage height, 5.54 ft, from floodmark; minimum daily, 2.5 ft³/s Jan. 6, 7, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 216 ft³/s May 12, gage height, 5.13 ft from floodmark; minimum daily, 20 ft³/s Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	29	26	31	36	32	37	78	40	26	25	29
2	26	29	26	33	32	31	42	72	40	27	25	30
3	27	30	27	34	30	32	60	61	39	26	26	31
4	26	29	29	35	30	32	54	53	39	25	31	31
5	26	29	31	36	27	32	62	49	39	30	33	30
6	26	28	33	36	26	32	58	66	40	30	32	30
7	26	29	34	36	27	31	60	66	39	27	30	30
8	26	28	35	35	29	23	63	55	38	25	28	30
9	26	32	35	34	30	32	55	49	40	25	25	30
10	26	29	35	32	31	34	49	47	42	29	25	32
11	26	28	35	31	31	32	60	48	39	30	26	31
12	26	30	35	30	31	33	70	61	44	29	26	32
13	26	30	35	29	30	31	76	72	42	27	27	32
14	26	30	35	29	29	35	76	56	38	25	25	31
15	27	29	33	29	31	40	62	54	36	26	21	30
16	27	27	25	28	32	38	54	53	40	25	26	30
17	27	27	28	28	30	36	51	50	40	26	29	30
18	27	27	30	27	33	35	49	49	40	25	30	30
19	30	36	32	27	50	34	47	47	37	26	28	30
20	29	32	32	27	85	36	45	45	36	26	29	29
21	27	30	32	28	76	38	46	44	35	26	38	30
22	27	27	30	35	36	40	57	43	34	25	36	30
23	27	26	25	39	34	43	52	41	34	24	33	30
24	27	27	25	41	34	46	45	41	32	27	34	30
25	27	26	20	42	33	44	43	43	32	32	33	30
26	27	26	22	42	33	43	42	41	32	41	32	30
27	28	25	24	42	32	42	46	53	30	34	30	31
28	28	24	26	41	32	40	41	50	29	32	30	31
29	27	24	26	40	32	39	49	43	28	32	26	31
30	27	25	26	40	---	38	64	42	28	31	24	31
31	28	---	28	39	---	37	---	41	---	27	27	---
TOTAL	832	848	915	1056	1022	1111	1615	1613	1102	866	890	912
MEAN	26.8	28.3	29.5	34.1	35.2	35.8	53.8	52.0	36.7	27.9	28.7	30.4
MAX	30	36	35	42	85	46	76	78	44	41	38	32
MIN	26	24	20	27	26	23	37	41	28	24	21	29
AC-FT	1650	1680	1810	2090	2030	2200	3200	3200	2190	1720	1770	1810

CAL YR 1983	TOTAL	10927	MEAN	29.9	MAX	70	MIN	17	AC-FT	21670
WTR YR 1984	TOTAL	12782	MEAN	34.9	MAX	85	MIN	20	AC-FT	25350

06466500 BAZILE CREEK NEAR NIOBRARA, NE

LOCATION.--Lat 42°45'26", long 97°56'50", in SW1/4 sec.7, T.32 N., R.5 W., Knox County, Hydrologic Unit 10170101, on left bank 60 ft shoreward and 20 ft downstream from centerline of bridge on State Highway 12, 2.5 mi upstream from mouth and 4.5 mi east of Niobrara.

DRAINAGE AREA.--440 mi^2, approximately.

PERIOD OF RECORD.--May 1952 to current year. Records for October 1931 to September 1932, published in WSP 731, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1279: 1952. WSP 1729: 1958(M). WDR NE-81-1: 1977,1979-80. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and nonrecording gage read at least twice weekly. Datum of gage is 1,210.81 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 16, 1952, nonrecording gage only, and Dec. 16, 1952, to June 16, 1957, water-stage recorder at downstream end of right pier, above 4.2 ft, at present site at datum 4 ft higher. June 17, 1957, to Sept. 14, 1958, water-stage recorder above 8.2 ft at present datum. Sept. 15, 1958, to Oct. 17, 1978, water-stage recorder at downstream end of left pier, above 4.3 ft, at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--32 years, 82.4 ft^3/s, 59,700 acre-ft/yr; median of yearly mean discharges, 70 ft^3/s, 50,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,600 ft^3/s June 16, 1957, gage height, 19.96 ft, present datum, from high point on surge, from rating curve extended above 6,500 ft^3/s on basis of contracted-opening measurements at gage heights 15.36 ft and 19.96 ft, present datum; maximum gage height, 20.25 ft Feb. 19, 1971, backwater from ice; no flow July 24, 25, Aug. 30, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 19, 1951, reached a stage of 15.36 ft, present datum, from floodmarks, discharge, 24,400 ft^3/s on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 20	1200	*2210	16.87	June 23	1530	2040	16.40
June 22	0730	2010	16.45				

Minimum daily discharge, 40 ft^3/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	52	58	65	90	129	228	631	184	160	85	50
2	42	52	58	65	100	131	251	564	180	153	80	56
3	44	51	58	68	90	132	642	443	171	156	74	53
4	45	52	56	70	100	139	508	377	222	145	73	54
5	46	53	54	70	90	132	471	338	403	146	88	49
6	44	54	52	75	70	127	379	420	189	141	74	47
7	41	54	52	75	80	120	406	696	175	141	72	46
8	41	62	56	70	85	110	520	531	176	137	68	52
9	42	84	58	70	90	100	445	406	201	137	66	50
10	44	63	58	65	100	100	360	333	230	171	63	52
11	48	59	56	60	110	130	391	258	195	173	63	57
12	49	74	54	55	110	160	752	307	233	149	63	62
13	49	65	50	50	110	210	762	363	250	128	62	61
14	49	64	50	50	120	191	714	310	199	121	57	62
15	49	65	48	50	103	185	535	275	174	126	55	62
16	48	64	45	45	110	166	413	254	178	117	59	63
17	47	61	45	50	90	184	344	238	202	110	61	61
18	52	59	50	50	80	166	303	227	217	117	62	63
19	62	120	52	50	100	154	276	199	195	107	61	64
20	58	114	52	55	200	161	260	187	1160	115	64	62
21	56	111	52	55	500	197	253	191	767	119	81	61
22	53	90	52	55	306	227	425	206	1070	96	73	64
23	51	79	50	60	138	292	377	199	1080	89	64	70
24	51	66	55	60	141	353	302	190	507	113	82	71
25	51	65	45	60	150	453	263	197	295	96	65	76
26	51	65	45	62	158	470	260	200	247	129	61	79
27	50	65	50	65	149	357	295	283	216	122	58	85
28	48	60	55	70	134	319	269	373	191	109	57	87
29	45	60	60	75	125	276	282	297	177	94	54	89
30	49	60	60	80	---	255	371	234	163	88	50	89
31	51	---	60	80	---	243	---	198	---	86	49	---
TOTAL	1496	2043	1646	1930	3829	6369	12057	9925	9847	3891	2044	1897
MEAN	48.3	68.1	53.1	62.3	132	205	402	320	328	126	65.9	63.2
MAX	62	120	60	80	500	470	762	696	1160	173	88	89
MIN	40	51	45	45	70	100	228	187	163	86	49	46
AC-FT	2970	4050	3260	3830	7590	12630	23920	19690	19530	7720	4050	3760

CAL YR 1983	TOTAL	42704	MEAN	117	MAX	900	MIN	30	AC-FT	84700
WTR YR 1984	TOTAL	56974	MEAN	156	MAX	1160	MIN	40	AC-FT	113000

MISSOURI RIVER MAIN STEM

06467000 LEWIS AND CLARK LAKE NEAR YANKTON, SD

LOCATION.--Lat 42°50'56", long 97°28'54", in SW1/4 sec.7, T.33 N., R.1 W., Cedar County, Nebraska, Hydrologic Unit 10170101, in powerhouse of Gavins Point Dam on Missouri River, 3.75 mi southwest of Yankton, 13.6 mi upstream from James River, 32.5 mi downstream from Niobrara River, and at mi 811.0.

DRAINAGE AREA.--279,500 mi^2, approximately.

PERIOD OF RECORD.--July 1955 to current year (monthend contents only). Prior to October 1955, published as Gavins Point Reservoir near Yankton.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Dec. 9, 1955, recorder at temporary location on wall of intake structure unit 3.

REMARKS.--Reservoir is formed by earthfill dam; storage began in July 1955. Maximum capacity, 504,000 acre-ft below elevation 1,210.0 ft, top of spillway gates. Normal maximum, 443,000 acre-ft below elevation 1,208.0 ft. Inactive storage, 157,000 acre-ft below elevation 1,195.0 ft. Dead storage, 23,000 acre-ft below elevation 1,180.0 ft, crest of spillway. Figures given herein represent elevations at powerhouse and total contents adjusted for wind effect.

The spillway consists of 14 taintor gates, each 40 ft wide by 30 ft high; spillway capacity, 280,000 ft^3/s at pool elevation 1,210.0 ft. Crest of spillway is at elevation 1,180 ft. Normal releases are through 3 power units, installation completed in January 1957; maximum release through power units is 35,000 ft^3/s at pool elevation 1,210.0 ft. Water is used for flood control, navigation, power, and incidental uses.

COOPERATION.--Elevations and contents furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 565,000 acre-ft Apr. 1, 1960, affected by wind; minimum since initial filling, 61,950 acre-ft Apr. 23, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 464,000 acre-ft Nov. 28; minimum, 330,000 acre-ft Mar. 9.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,207.85	439,000	-
Oct. 31	1,208.08	444,000	+5,000
Nov. 30	1,208.15	446,000	+2,000
Dec. 31	1,207.90	439,000	-7,000
CAL YR 1983	-	-	+75,000
Jan. 31	1,208.32	451,000	+12,000
Feb. 29	1,204.89	357,000	-94,000
Mar. 31	1,205.25	367,000	+10,000
Apr. 30	1,205.83	378,000	+11,000
May 31	1,205.66	377,000	-1,000
June 30	1,205.97	387,000	+10,000
July 31	1,207.80	436,000	+49,000
Aug. 31	1,208.04	444,000	+8,000
Sept. 30	1,208.05	444,000	0
WTR YR 1984	-	-	+5,000

06467500 MISSOURI RIVER AT YANKTON, SD

LOCATION.--Lat 42°51'58", long 97°23'37", in SW1/4SW1/4 sec.18, T.93 N., R.55 W., Yankton County, Hydrologic Unit 10170101, near left bank in downstream end of left pier of Meridian Highway Bridge on U.S. Highway 81, 5.2 mi downstream from Gavins Point Dam, 6.0 mi upstream from James River, and at mi 805.8.

DRAINAGE AREA.--279,500 mi², approximately.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1309. Gage-height records collected at same site March 1873 to November 1886, March 1905 to May 1908 (fragmentary), August 1921 to date (except winter months prior to 1932), are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 1,139.68 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1932, nonrecording gage, and Sept. 20, 1932 to Mar. 9, 1967, water-stage recorder at present site and at datum 20.0 ft higher.

REMARKS.--Records good except those for winter periods, Dec. 15 to Jan. 25 and Feb. 5-7, which are poor. Flow completely regulated by Lewis and Clark Lake 5.2 mi upstream since July 1955 (see station 06467000). Many diversions for irrigation and water supply above station. Corps of Engineers gage-height telemeter and satellite data-collection platform at station.

AVERAGE DISCHARGE.--54 years, 26,470 ft³/s, 19,180,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480,000 ft³/s Apr. 13, 1952; maximum gage height, 35.5 ft Apr. 13, 14, 1952 (present datum); minimum daily discharge, 2,700 ft³/s Nov. 15, 16, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 50.5 ft Apr. 5, 1881 (ice jam), present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48,200 ft³/s at 1200 hours, July 28, gage height, 19.15 ft; maximum gage height, 20.30 ft Dec. 25 (backwater from ice); minimum daily discharge, 10,000 ft³/s June 23-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39000	37900	37100	20000	17700	19400	16600	17900	22500	17000	45700	47100
2	38900	37900	33700	20000	17500	19500	15900	17800	23700	19400	45800	46900
3	38800	37900	32200	18800	17600	19500	13800	17800	25300	21300	46400	47100
4	39000	37800	29600	18000	17500	19300	12500	18800	26600	22400	47300	47100
5	38900	37600	27800	17500	17500	19400	12300	19200	26700	21400	47300	47300
6	39000	37600	26200	17000	17500	20700	12300	19300	25600	23000	47400	47300
7	38900	37600	24600	17000	17500	18000	12500	19500	24100	24700	47400	47200
8	39000	37600	24300	17000	17600	23200	12500	19400	22500	26900	47400	47000
9	39000	37400	24100	17000	17500	23000	12400	19600	19100	29600	47500	47100
10	39000	37300	24100	17000	17500	23000	12200	19800	16700	32300	47500	47300
11	38800	37400	24100	17000	18000	23200	13500	19800	18400	36200	47500	47500
12	38700	37500	24200	17000	19200	23600	14900	19800	16400	38600	47500	47300
13	38600	37300	24000	17000	19300	22700	15100	19700	12500	41400	47400	47300
14	38800	37100	24000	18000	19400	22300	14900	18600	14700	43900	47500	47600
15	38600	37200	24000	19000	19400	22100	15100	16400	17000	45200	47500	47500
16	38400	37400	24000	20000	19500	23100	15400	19400	16900	45500	47400	47400
17	38400	37300	24000	20000	17200	23000	16200	21300	17300	45400	47400	47500
18	38500	37300	24000	20000	19500	23600	17300	21300	16800	45500	47400	47500
19	38300	37300	24000	20000	19400	24400	18000	21300	15600	45000	47500	47600
20	37200	36700	23000	20000	19500	25200	19200	21300	14000	44300	47500	46500
21	38100	37100	22500	20000	19500	25800	17500	21200	14500	44300	47100	46600
22	38100	37100	22000	20000	17100	26200	15000	21200	12000	44200	47100	46500
23	38200	36900	21500	20000	19300	25800	14900	22000	10000	44300	47200	46500
24	38000	36900	21000	20000	19500	24400	14800	22100	10000	44200	47200	46300
25	38000	37000	20000	20000	19400	22200	15800	22500	10000	45400	47200	46300
26	38100	37000	20000	19800	19500	18100	16700	23200	10000	45700	47200	46500
27	38100	37100	20000	18500	19500	14900	17200	23300	12000	45500	47200	46400
28	38100	36700	20000	18200	19500	13600	18100	20800	14000	46700	47300	46200
29	38000	36700	20000	17600	19500	14500	18500	18500	14000	45900	47200	46400
30	38000	37200	20000	17800	---	16300	18400	19200	14000	45400	47200	46400
31	38000	---	20000	17600	---	16600	---	20900	---	45500	47300	---
TOTAL	1192500	1118800	750000	576800	538600	656600	459500	622900	512900	1166100	1463500	1409200
MEAN	38470	37290	24190	18610	18570	21180	15320	20090	17100	37620	47210	46970
MAX	39000	37900	37100	20000	19500	26200	19200	23300	26700	46700	47500	47600
MIN	37200	36700	20000	17000	17100	13600	12200	16400	10000	17000	45700	46200
AC-FT	2365000	2219000	1488000	1144000	1068000	1302000	911400	1236000	1017000	2313000	2903000	2795000

CAL YR 1983 TOTAL 10183060 MEAN 27900 MAX 39100 MIN 6000 AC-FT 20200000
WTR YR 1984 TOTAL 10467400 MEAN 28600 MAX 47600 MIN 10000 AC-FT 20760000

06478518 BOW CREEK NEAR ST. JAMES, NE

LOCATION.--Lat 42°43'48", long 97°08'53", in SE1/4SW1/4 sec.24, T.32 N., R.2 E., Cedar County, Hydrologic Unit 10170101, on right downstream end of bridge on State Highway 12, 0.25 mi west of intersection of St. James road and State Highway 12, 0.7 mi south of St. James.

DRAINAGE AREA.--304 mi^2.

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,180.88 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--6 years, 77.2 ft^3/s, 55,930 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft^3/s June 21, 1984, gage height, 13.23 ft, from high-water mark; minimum daily, 7.4 ft^3/s Jan. 15, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,400 ft^3/s June 21, gage height, 13.23 ft, from high-water mark; minimim daily discharge, 38 ft^3/s Dec. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	57	47	56	94	86	178	900	176	181	108	67
2	53	57	46	60	90	83	199	780	148	177	103	67
3	51	62	46	62	88	82	822	507	135	173	98	66
4	50	64	49	64	82	91	580	425	114	173	99	62
5	49	63	50	64	68	83	509	383	112	160	99	60
6	45	63	48	64	84	84	364	633	119	149	98	60
7	47	61	46	64	90	80	588	921	118	141	100	63
8	47	61	47	64	94	60	809	357	189	140	97	64
9	48	67	48	62	96	90	521	279	201	142	92	66
10	49	67	50	58	98	78	396	270	230	158	89	70
11	49	60	48	60	110	78	447	280	318	153	86	70
12	48	63	46	54	120	82	1460	254	473	135	82	69
13	48	65	45	52	100	78	772	269	280	124	80	68
14	48	65	43	56	111	81	771	218	177	120	77	71
15	51	64	38	56	124	101	572	205	159	118	79	70
16	49	64	40	52	162	89	450	208	329	112	80	68
17	46	63	40	48	120	93	380	213	201	129	81	68
18	46	61	40	47	116	92	313	225	190	113	81	69
19	54	79	40	46	82	90	239	210	175	107	76	64
20	55	106	40	45	85	88	253	195	160	358	73	61
21	54	78	41	47	96	90	320	180	5400	139	122	61
22	53	76	43	48	99	93	729	170	5240	124	88	63
23	53	77	45	52	99	109	458	168	2900	117	77	62
24	52	75	47	56	93	125	293	177	1080	110	74	60
25	51	74	48	62	89	234	239	162	512	113	73	61
26	51	76	52	68	88	411	1380	165	329	141	76	63
27	53	66	50	74	87	317	410	268	261	135	76	66
28	52	60	50	80	85	267	284	407	226	117	74	64
29	53	54	50	86	84	217	287	248	210	115	70	64
30	55	60	52	88	---	194	621	205	185	115	68	68
31	57	---	54	90	---	186	---	191	---	112	67	---
TOTAL	1572	2008	1429	1885	2834	3932	15644	10073	20347	4401	2643	1955
MEAN	50.7	66.9	46.1	60.8	97.7	127	521	325	678	142	85.3	65.2
MAX	57	106	54	90	162	411	1460	921	5400	358	122	71
MIN	45	54	38	45	68	60	178	162	112	107	67	60
AC-FT	3120	3980	2830	3740	5620	7800	31030	19980	40360	8730	5240	3880

CAL YR 1983	TOTAL	35769	MEAN	98.0	MAX	3960	MIN	16	AC-FT	70950
WTR YR 1984	TOTAL	68723	MEAN	188	MAX	5400	MIN	38	AC-FT	136300

06486000 MISSOURI RIVER AT SIOUX CITY, IA
(National stream-quality accounting network station)

LOCATION.--Lat 42°29'09", long 96°24'49", in NW1/4SE1/4 sec.16, T.29 N., R.9 E., sixth principal meridian, Dakota County, Nebraska, Hydrologic Unit 10230001, on right bank on upstream side of bridge on U.S. Highway 20 and 77 at South Sioux City, NE, 1.9 mi downstream from Big Sioux River, and at mi 732.3.

DRAINAGE AREA.--314,600 mi², approximately.

PERIOD OF RECORD.--October 1897 to current year in reports of Geological Survey. Prior to October 1928 and October 1931 to September 1938, monthly discharges only published in WSP 1310. January 1879 to December 1890 (monthly discharges only) in House Document 238, 73rd Congress, 2d session, Missouri River. Gage-height records collected in this vicinity September 1878 to December 1899 are contained in reports of Missouri River Commission and since July 1889 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 716: 1929-30. WSP 876: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,056.98 ft National Geodetic Vertical Datum of 1929. Sept. 2, 1878, to Dec. 31, 1905, nonrecording gages at various locations within 1.7 mi of present site and at various datums. Jan. 1, 1906, to Feb. 14, 1935, nonrecording gage, and Feb. 15, 1935 to Sept. 30, 1969, water-stage recorder at site 227 ft downstream at datum 19.98 ft higher, and Oct. 1, 1969 to Sept. 30, 1970 at datum 20.00 ft higher. Oct. 1, 1970 to Jan. 30, 1981, water-stage recorder at site 227 ft downstream at present datum.

REMARKS.--Records good. Flow regulated by upstream main-stem reservoirs. National Weather Service gage-height telemeter at station. Corps of Engineers rain-gage and gage-height satellite data collection platform at station.

AVERAGE DISCHARGE.--87 years, 32,040 ft³/s, 23,210,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441,000 ft³/s Apr. 14, 1952, gage height, 24.28 ft, datum then in use; minimum, 2,500 ft³/s Dec. 29, 1941; minimum gage height, 9.00 ft, Jan. 8, 1980, based on gage readings at site 14 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 104,000 ft³/s June 25, gage height, 30.91 ft; minimum daily discharge, 10,500 ft³/s Dec. 22; minimum gage height not determined, occurred during period of no gage-height record Dec. 22-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37700	36900	35400	21900	21300	23700	37700	39900	29300	50300	48700	47400
2	38100	37100	35400	22600	21200	24100	37900	38700	30100	45700	48400	47000
3	38300	37500	34300	22400	21100	24400	39600	38700	30800	43000	48100	46500
4	38200	37900	33500	22000	21000	25100	39700	39500	31700	42200	47900	46300
5	37900	38000	32400	21000	19400	25400	38400	41000	32300	41600	48300	46100
6	37100	37900	30400	21100	16800	25000	39500	39900	32900	38700	47800	45800
7	36700	38000	28500	19900	19500	25100	41100	41900	33100	37900	47900	46000
8	37100	38100	26100	19200	21000	21700	43700	42300	34300	37900	48300	46100
9	37200	38600	24900	18700	20900	26400	42700	41900	32200	39100	48300	46100
10	37600	38200	24500	18800	20800	27800	40100	43500	29000	41900	48400	46300
11	38300	37500	26000	18700	20300	29400	38800	45200	26600	44000	48600	46600
12	38200	37600	24700	19300	20400	27400	44400	42800	33400	46400	48500	46700
13	38600	37700	23900	18600	21500	28000	50500	38900	33400	48100	48300	46600
14	38100	37800	24100	18300	21500	27900	53300	35800	31100	50700	48100	46500
15	38000	37500	22900	19200	21800	27200	57300	33000	33800	52600	48600	46500
16	37800	37400	21700	19900	24500	26700	63900	28700	42500	53600	49100	46200
17	37500	37400	21100	20400	27400	27000	63000	29300	43700	53800	49000	46000
18	37200	37400	18100	21600	25700	27600	57500	31200	45500	53000	48700	46100
19	38000	38100	20300	21200	21100	28100	53500	30700	48700	52500	48400	46200
20	38200	38700	20500	20900	24000	28900	49700	30000	61000	52700	48400	46400
21	37500	38000	15300	21800	24000	29700	47000	29300	68100	50800	49500	45700
22	37400	38800	10500	22600	24500	30500	44600	29100	76000	50500	49100	45700
23	37200	38900	12500	23100	22700	31600	39700	28700	77700	49800	49100	46100
24	36800	38200	17000	23000	23000	33300	37300	28800	91500	49100	48800	46100
25	37300	37600	17600	22500	23200	34300	35300	29600	103000	48700	48100	46200
26	37800	37600	20600	22700	23200	34400	36100	29100	96000	50000	47500	45900
27	38400	37500	22600	21800	23400	33100	37400	30100	83700	50300	47000	46100
28	38100	37000	22500	20900	23400	32600	36700	32800	72900	49700	47300	46200
29	37600	36100	22400	21000	23400	34800	36200	32200	65200	50300	47800	46100
30	37200	36100	23200	21000	---	36200	38800	28700	57600	50200	47800	46300
31	36600	---	23200	21100	---	37300	---	28500	---	49000	47400	---
TOTAL	1167700	1131100	736100	647200	642000	894700	1321400	1079800	1507100	1474100	1497200	1387800
MEAN	37670	37700	23750	20880	22140	28860	44050	34830	50240	47550	48300	46260
MAX	38600	38900	35400	23100	27400	37300	63900	45200	103000	53800	49500	47400
MIN	36600	36100	10500	18300	16800	21700	35300	28500	26600	37900	47000	45700
AC-FT	2316000	2244000	1460000	1284000	1273000	1775000	2621000	2142000	2989000	2924000	2970000	2753000

CAL YR 1983 TOTAL 12062100 MEAN 33050 MAX 44000 MIN 10500 AC-FT 23930000
WTR YR 1984 TOTAL 13486200 MEAN 36850 MAX 103000 MIN 10500 AC-FT 26750000

OMAHA CREEK BASIN

06601000 OMAHA CREEK AT HOMER, NE

LOCATION.--Lat 42°19'29", long 96°29'43", in SW1/4SE1/4 sec.11, T.27 N., R.8 E., Dakota County, Hydrologic Unit 10230001, on left bank 80 ft downstream from bridge on main street of Homer.

DRAINAGE AREA.--168 mi^2.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-72: Drainage area. WDR NE-75-1: 1971-73.

GAGE.--Water-stage recorder. Datum of gage is 1,082.45 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 4, 1952, at bridge 0.5 mi downstream at datum 8.03 ft lower. Aug. 4, 1952, to Nov. 3, 1966, at site 80 ft upstream at present datum. June 27, 1984 to Aug. 28, 1984 at temporary site 700 ft downstream at datum 2.00 ft lower.

REMARKS.--Records good except those for winter period and those for period of no gage-height record, May 17 to June 26, which are poor.

AVERAGE DISCHARGE.--39 years, 36.1 ft^3/s, 26,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,100 ft^3/s Feb. 19, 1971, gage height, 26.47 ft, from floodmark, from rating curve extended above 3,700 ft^3/s on basis of slope-area meaurements at gage heights 16.38 ft and 23.62 ft; minimum daily, 0.1 ft^3/s Sept. 16, 18, 19, 1948, Sept. 9, 13, 14, 1955, Oct. 7, 8, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood known occurred June 4, 1940, stage, about 32.5 ft, present site and datum, discharge estimated as 51,000 ft^3/s at site 2.5 mi upstream from present site.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 12	----	a2500	----	June 22	----	*4060	b15.82
June 16	----	a3000	----				

a Estimated from hydrographic comparison with nearby stations.
b From floodmark

Minimum daily discharge, 19 ft^3/s Dec. 18, 19, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	29	41	42	47	77	112	381	160	150	58	40
2	23	30	40	46	50	81	128	308	150	147	56	41
3	23	39	36	48	48	76	295	267	150	139	56	42
4	26	43	35	50	52	98	236	268	150	139	55	42
5	31	31	34	52	40	90	181	296	160	142	56	41
6	26	30	32	48	36	70	164	276	150	137	56	42
7	24	30	30	44	44	60	170	403	150	121	56	42
8	24	30	30	38	50	50	270	272	450	116	55	41
9	23	43	30	34	56	48	243	261	250	115	46	41
10	24	55	32	30	58	45	197	253	200	119	46	44
11	27	38	33	32	60	50	203	254	190	111	49	46
12	26	33	30	34	70	60	463	236	1100	98	50	44
13	23	37	26	26	80	99	295	233	400	94	50	44
14	24	36	24	30	100	77	253	212	250	92	50	43
15	24	34	24	28	228	199	223	212	230	107	51	43
16	24	29	22	26	548	134	205	212	1200	95	53	42
17	23	29	20	24	332	88	196	190	350	107	55	41
18	24	29	19	22	126	74	186	210	250	86	56	41
19	39	46	19	24	81	68	178	250	230	88	53	40
20	43	56	20	20	89	67	176	220	700	210	50	39
21	33	34	19	28	95	66	208	185	500	92	58	38
22	29	30	20	36	89	82	403	185	1500	84	54	37
23	28	30	21	38	87	184	300	180	500	80	48	41
24	28	28	22	40	94	190	234	160	200	76	47	42
25	27	33	25	40	91	186	216	280	190	76	47	40
26	27	26	36	40	103	158	212	240	180	251	46	40
27	28	25	34	42	89	134	205	210	173	79	44	43
28	27	24	30	42	79	128	192	400	173	63	43	43
29	25	22	28	42	77	125	205	250	167	60	41	42
30	28	30	26	44	---	114	315	200	155	58	40	43
31	28	---	26	46	---	112	---	170	---	57	40	---
TOTAL	834	1009	864	1136	2999	3090	6864	7674	10608	3389	1565	1248
MEAN	26.9	33.6	27.9	36.6	103	99.7	229	248	354	109	50.5	41.6
MAX	43	56	41	52	548	199	463	403	1500	251	58	46
MIN	23	22	19	20	36	45	112	160	150	57	40	37
AC-FT	1650	2000	1710	2250	5950	6130	13610	15220	21040	6720	3100	2480

CAL YR 1983	TOTAL	29662	MEAN	81.3	MAX	1250	MIN	14	AC-FT	58830
WTR YR 1984	TOTAL	41280	MEAN	113	MAX	1500	MIN	19	AC-FT	81880

06610000 MISSOURI RIVER AT OMAHA, NE

LOCATION.--Lat 41°15'32", long 95°55'20", in SE1/4NW1/4 sec.23, T.15 N., R.13 E., Douglas County, Hydrologic Unit 10230006, on right bank on left side of concrete floodwall, at foot of Douglas Street, 275 ft downstream from Interstate 480 Highway bridge in Omaha, and at mi 615.9.

DRAINAGE AREA.--322,800 mi², approximately.

PERIOD OF RECORD.--September 1928 to current year. April 1872 to December 1899 (gage heights only) in reports of the Missouri River Commission and since January 1875 (gage heights only) in reports of the National Weather Service.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 948.24 ft National Geodetic Vertical Datum of 1929. See WSP 1730 for history of changes prior to Sept. 30, 1936. Oct. 1, 1936 to Sept. 30, 1982 at datum 10.00 ft higher.

REMARKS.--Records good except those for Dec. 30 to Jan. 8, Jan. 15 to Feb. 6, which are poor. Flow regulated by upstream main-stem reservoirs. National Weather Service gage-height telemeter at station. Corps of Engineers rain-gage and gage-height satellite data collection platform at station.

AVERAGE DISCHARGE.--56 years, 30,420 ft³/s, 22,039,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 396,000 ft³/s Apr. 18, 1952, gage height, 40.20 ft, present datum; minimum, about 2,200 ft³/s Jan. 6, 1937; minimum gage height observed, 7.23 ft present datum, Jan. 10, 1957, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 116,000 ft³/s June 27, gage height, 29.02 ft backwater from Platte River; minimum daily discharge, 15,500 ft³/s Dec. 24; minimum gage height, 12.58 ft Dec. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43000	41800	37200	27000	24000	33300	48000	58900	40600	85000	55300	50800
2	42400	40300	36200	27000	24000	32800	48800	61000	41500	73500	56100	50400
3	42900	39900	36100	26400	24000	32700	51700	59400	41300	64200	56100	49900
4	43500	41100	33900	26200	24000	32400	57700	58300	41400	58400	55600	49200
5	43400	41100	33300	26300	26000	32900	53400	58300	41500	56600	55500	48800
6	43300	41800	32200	26300	26000	33100	50200	58400	42100	54400	56300	49200
7	42800	42000	29500	26000	24700	31900	49600	58200	42700	50000	56600	49500
8	41900	42800	28400	25300	22200	31200	53400	60800	54400	48400	56200	50100
9	42000	44300	27200	24900	24900	28500	60600	57600	72700	48700	56200	51100
10	42100	44900	27100	24600	26000	28700	59600	53300	64500	49700	57000	51500
11	42700	45800	27200	23800	26400	34000	56000	53100	48300	52300	56300	51900
12	43200	44300	27500	23400	27500	35900	60100	54000	44900	54900	55200	52400
13	42500	44100	26900	23900	28000	34100	70900	52500	68400	55700	54500	51800
14	41700	44100	24900	23600	30400	33600	76000	50100	70100	56300	54200	52000
15	41300	43900	23900	23200	33700	37500	76700	47000	72400	57800	53500	51900
16	40300	43000	23000	22900	39700	36300	78000	44400	70900	59700	53300	52400
17	40000	43400	22200	22800	42200	33300	81900	40000	87400	61900	53500	51700
18	40500	43200	22200	23500	42100	33100	82700	38400	92300	63900	53000	51200
19	41200	44400	22000	24400	37800	35100	76500	48500	94200	63100	53200	51400
20	42800	45600	22000	25500	32200	34000	69600	49300	93800	61600	53700	51700
21	42200	46400	21000	25800	31900	34600	65300	42300	94600	61400	53400	52100
22	40400	46200	20000	25600	34000	34700	63200	41400	96900	59200	53800	51700
23	40200	47000	18600	25600	37000	38700	62900	45300	102000	57000	54000	51200
24	40600	46900	15500	26600	33900	45400	58200	40300	107000	55600	52800	51500
25	40200	45200	17100	26600	32200	47400	51300	39300	111000	54900	52800	52500
26	40400	44100	18300	26100	33300	48600	49200	43900	112000	54900	53100	52700
27	41100	43800	19000	25500	34600	49400	50500	41300	114000	58700	53700	51600
28	41700	42500	24000	24800	34100	48100	52400	40700	111000	58000	52400	50700
29	42500	40400	28000	24400	33900	45400	51000	48400	104000	55000	51600	49800
30	42800	38600	27300	24100	---	46800	59500	50800	93900	54100	51300	50000
31	43700	---	27000	24000	---	46800	---	43100	---	55200	51400	---
TOTAL	1299300	1302900	798700	776100	890700	1150300	1824900	1538300	2271800	1800100	1681600	1532700
MEAN	41910	43430	25760	25040	30710	37110	60830	49620	75730	58070	54250	51090
MAX	43700	47000	37200	27000	42200	49400	82700	61000	114000	85000	57000	52700
MIN	40000	38600	15500	22800	22200	28500	48000	38400	40600	48400	51300	48800
AC-FT	2577000	2584000	1584000	1539000	1767000	2282000	3620000	3051000	4506000	3570000	3335000	3040000

CAL YR 1983	TOTAL	15718600	MEAN	43060	MAX	80500	MIN	15500	AC-FT	31180000
WTR YR 1984	TOTAL	16867400	MEAN	46090	MAX	114000	MIN	15500	AC-FT	33460000

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 41°59'25", long 104°02'57", in SW1/4NE1/4SE1/4 sec.4, T.23 N., R.58 W., Scotts Bluff County, Nebraska, Hydrologic Unit 10180009, on right bank 650 ft upstream from bridge on Nebraska State Highway 86, 700 ft downstream from Wyoming-Nebraska State line, and 0.5 mi south of Henry, NE.

DRAINAGE AREA.--22,218 mi^2, of which 1,929 mi^2, is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1929 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area

GAGE.--Water-stage recorder. Datum of gage is 4,021.35 ft, National Geodetic Vertical Datum of 1929. Prior to Nov. 6, 1929, nonrecording gage and Nov. 6, 1929, to Sept. 30, 1959, water-stage recorder, at site 0.5 mi upstream at datum 4.42 ft higher. Oct. 7, 1959 to Feb. 22, 1972, water-stage recorder, at site 0.5 mi upstream at datum 3.42 ft higher.

REMARKS.--Records fair except those for December and January, which are poor. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Gering-Mitchell Canal diverts from right bank 0.8 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 17,900 ft^3/s June 2, 1929, gage height, 7.04 ft, site and datum then in use; minimum daily, 13 ft^3/s May 21, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,780 ft^3/s June 4, gage height, 6.42 ft; minimum daily, 337 ft^3/s Jan. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	499	512	390	569	1850	4530	4870	8080	6870	2830	3940
2	1140	499	518	397	575	1880	4520	4850	8020	6980	3040	3920
3	1150	502	530	403	575	2050	4440	4900	8210	6900	3110	3810
4	1110	505	532	412	575	2400	4520	5020	8540	6790	3050	3750
5	1000	506	530	420	575	2610	4570	5130	8420	6740	2980	3830
6	930	507	523	428	586	2990	4660	5170	8380	6790	2890	3670
7	881	500	529	432	586	3200	4710	5220	8190	6720	2800	2910
8	843	507	522	438	586	3230	4710	5260	8100	5690	2730	2190
9	817	524	513	435	586	3300	4690	5240	8120	3910	2640	2010
10	800	524	510	438	581	3330	4750	5170	7950	3150	2620	2000
11	787	518	517	438	622	3370	4780	5430	8160	2820	2540	1920
12	762	513	522	438	821	3380	4100	6010	7750	2850	2470	1730
13	732	518	522	432	913	3340	3570	6690	8160	2830	2510	1590
14	711	524	522	425	1000	3310	3360	7000	8520	2850	2450	1470
15	698	518	518	412	1100	3280	3270	7280	8380	2860	2440	1330
16	679	518	505	398	1100	3330	3250	7180	8060	3390	3000	1280
17	654	518	476	375	1110	3330	3170	7280	7660	3060	3820	1260
18	640	516	452	357	1100	3380	3130	7520	7180	2840	3980	1210
19	623	511	436	337	1090	3370	3230	7570	7410	2500	3840	1190
20	605	513	427	357	1110	3780	3610	7390	7420	2500	3820	1170
21	583	525	410	376	1230	4030	3740	7070	7000	2610	3620	1150
22	563	533	402	396	1490	4100	3960	7180	6970	2690	3840	1260
23	551	532	403	422	1660	4370	4080	7620	6610	2550	3970	1530
24	539	532	389	446	1710	4620	4170	8170	6230	2620	3880	1570
25	525	534	382	487	1750	4650	4290	8350	6450	2570	3990	1590
26	517	529	390	547	1780	4640	4560	8210	6660	2530	4000	1610
27	513	523	394	552	1810	4610	4720	8360	6490	2480	3790	1630
28	505	516	397	546	1810	4580	4800	8320	6470	2410	3740	1630
29	496	516	396	550	1840	4640	4770	8420	6400	2420	3800	1550
30	495	513	395	563	---	4570	4870	8350	6570	2400	3930	1220
31	495	---	397	563	---	4600	---	8230	---	2770	3920	---
TOTAL	22664	15493	14471	13610	30840	110120	125530	208460	226560	117090	102040	60920
MEAN	731	516	467	439	1063	3552	4184	6725	7552	3777	3292	2031
MAX	1320	534	532	563	1840	4650	4870	8420	8540	6980	4000	3940
MIN	495	499	382	337	569	1850	3130	4850	6230	2400	2440	1150
AC-FT	44950	30730	28700	27000	61170	218400	249000	413500	449400	232200	202400	120800

CAL YR 1983 TOTAL 997211 MEAN 2732 MAX 7710 MIN 131 AC-FT 1978000
WTR YR 1984 TOTAL 1047798 MEAN 2863 MAX 8540 MIN 337 AC-FT 2078000

AVAILABLE

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

WATER QUALITY RECORDS

LOCATION.--Daily water temperatures and sampling for specific conductance collected at Farmers Canal diversion dam 1.0 mi downstream from discharge station.

PERIOD OF RECORD.--Water years 1966 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)
OCT										
06...	1800	919	619	8.0	15.0	650	8.6	64	290	95
NOV										
17...	1500	522	860	8.4	9.0	645	11.4	280	290	72
JAN										
04...	1300	412	800	8.3	4.5	657	11.0	K13	260	35
FEB										
15...	1700	1100	--	--	3.0	--	--	--	280	83
MAR										
22...	1030	4090	--	--	6.5	--	--	--	270	101
MAY										
01...	1800	4940	700	8.1	9.5	650	10.6	110	260	82
JUN										
11...	1745	8190	--	--	16.0	--	--	--	200	60
JUL										
17...	1120	3060	--	--	20.0	--	--	--	210	58
AUG										
16...	1100	2750	--	--	23.0	--	--	--	240	70
SEP										
19...	1300	1160	--	--	15.0	660	8.0	130	260	83

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)
OCT										
06...	80	23	69	2	6.1	200	200	16	.40	21
NOV										
17...	79	23	77	2	4.5	220	200	17	.40	17
JAN										
04...	68	23	81	2	6.2	230	200	19	.30	18
FEB										
15...	72	25	59	2	5.1	200	180	14	.40	14
MAR										
22...	69	24	60	2	4.3	170	200	15	.60	7.0
MAY										
01...	67	23	53	1	2.6	180	160	14	.50	11
JUN										
11...	52	17	42	1	2.7	140	130	9.3	.30	10
JUL										
17...	55	17	44	1	3.8	150	140	9.5	.20	14
AUG										
16...	63	20	50	1	3.9	170	150	11	.40	9.8
SEP										
19...	69	22	63	2	4.6	190	200	14	.40	18

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
OCT 06...	530	.73	1330	1.0	1.2	.060	1.4	1.5	2.5	.600
NOV 17...	550	.75	775	1.0	.90	.100	1.1	1.2	2.2	.000
JAN 04...	550	.75	614	1.2	1.1	.100	.70	.80	2.0	.010
FEB 15...	490	.67	1450	--	.70	--	--	--	--	.090
MAR 22...	480	.66	5320	--	.20	--	--	--	--	.000
MAY 01...	460	.62	6120	.30	.30	<.080	--	.70	1.0	.000
JUN 11...	350	.47	7680	--	.20	--	--	--	--	.340
JUL 17...	370	.51	3090	--	.50	--	--	--	--	.210
AUG 16...	410	.56	3040	--	.00	--	--	--	--	.020
SEP 19...	500	.68	1560	--	.60	--	--	--	--	.030

06677500 HORSE CREEK NEAR LYMAN, NE

LOCATION.--Lat 41°56'21", long 103°59'13", in SE1/4NE1/4 sec.25, T.23 N., R.58 W., Scotts Bluff County, Hydrologic Unit 10180012, on right bank 10 ft upstream from county highway bridge, 1.8 mi upstream from mouth, 2.2 mi downstream from Owl Creek, and 3.2 mi northeast of Lyman.

DRAINAGE AREA.--1,570 mi², approximately, of which about 40 mi² is noncontributing.

PERIOD OF RECORD.--February 1931 to current year.

REVISED RECORDS.--WSP 926: 1940(M). WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,992.84 ft, National Geodetic Vertical Datum of 1929 (levels by private engineering firm). See WSP 2118 for history of changes prior to Apr. 17, 1967.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--53 years, 72.7 ft³/s, 52,670 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,110 ft³/s June 6, 1967, gage height, 10.82 ft, from rating curve extended above 1,900 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.4 ft³/s Feb. 1, 2, 1949.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 885 ft³/s July 31, gage height, 6.02 ft; minimum daily, 28 ft³/s Dec. 20-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215	53	40	30	119	172	175	332	262	164	276	169
2	155	52	39	30	122	178	180	311	308	166	256	177
3	130	52	39	30	122	188	183	302	311	164	286	184
4	117	51	39	40	124	186	188	289	316	161	266	183
5	110	51	38	50	124	183	211	284	311	158	244	194
6	104	50	38	50	130	178	247	276	334	142	226	214
7	99	50	38	50	132	170	248	267	340	145	214	201
8	94	51	37	50	145	164	235	263	323	145	197	219
9	92	53	37	50	145	167	222	261	308	154	206	262
10	90	55	39	49	141	167	210	253	285	150	204	266
11	89	54	41	49	139	176	208	247	295	141	191	270
12	87	54	42	49	130	176	208	241	306	134	174	276
13	85	53	39	49	125	176	196	231	322	130	156	261
14	82	51	38	49	130	168	184	243	343	124	141	298
15	81	50	36	48	135	173	180	259	360	124	133	352
16	78	50	35	48	141	166	178	249	408	394	135	324
17	75	49	34	48	143	161	176	267	420	275	136	390
18	73	49	32	48	140	164	173	288	447	264	131	393
19	72	48	30	50	136	169	172	325	480	262	128	370
20	70	48	28	50	135	173	208	392	472	234	133	304
21	68	49	28	50	136	177	217	434	447	254	135	274
22	67	48	28	52	136	173	229	424	413	262	132	274
23	65	45	28	52	140	168	241	399	382	236	129	288
24	62	40	28	52	158	169	243	405	325	222	137	306
25	62	42	28	52	164	171	278	396	290	260	146	375
26	61	40	28	74	172	174	366	393	239	252	154	500
27	60	40	28	89	173	180	326	451	194	251	164	482
28	58	40	29	94	175	178	321	402	183	228	169	426
29	57	39	29	107	173	173	339	364	169	213	163	389
30	55	39	29	110	---	171	335	335	144	214	144	330
31	55	---	30	110	---	173	---	269	---	442	137	---
TOTAL	2668	1446	1052	1759	4085	5362	6877	9872	9737	6465	5443	8951
MEAN	86.1	48.2	33.9	56.7	141	173	229	318	325	209	176	298
MAX	215	55	42	110	175	183	366	451	480	442	286	500
MIN	55	39	28	30	119	161	172	231	144	124	128	169
AC-FT	5290	2870	2090	3490	8100	10640	13640	19580	19310	12820	10800	17750

CAL YR 1983 TOTAL 59352 MEAN 163 MAX 716 MIN 24 AC-FT 117700
WTR YR 1984 TOTAL 63717 MEAN 174 MAX 500 MIN 28 AC-FT 126400

06678000 SHEEP CREEK NEAR MORRILL, NE

LOCATION.--Lat 41°57'50", long 103°56'20", in NW1/4SW1/4 sec.16, T.23 N., R.57 W., Scotts Bluff County, Hydrologic Unit 10180009, on right bank 40 ft upstream from Burlington Northern Inc. bridge, 50 ft downstream from bridge on U.S. Highway 26 1 mi west of Morrill, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--362 mi², of which about 25 mi² is noncontributing.

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WDR NE-67: Drainage area. WSP 2118: 1936(M), 1946(M).

GAGE.--Water-stage recorder. Datum of gage is 3,995.04 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 14, 1940, nonrecording gage at site 20 ft upstream at same datum.

REMARKS.--Records good. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--53 years, 55.1 ft³/s, 39,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 516 ft³/s July 21, 1978, gage height, 6.62 ft; maximum gage height, 6.75 ft Aug. 2, 1932, from floodmark, due to break in Interstate Canal (discharge not determined); minimum daily discharge, 0.1 ft³/s Dec. 16, 23, 1956, Jan. 18, Mar. 12, 1957, result of diversion for construction upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 161 ft³/s July 16, gage height, 2.86 ft; minimum daily, 4.7 ft³/s May 28-June 5, July 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	93	90	81	77	73	68	74	4.7	5.1	11	6.3
2	109	93	90	84	76	71	69	73	4.7	5.4	9.9	6.3
3	107	91	90	85	76	70	69	74	4.7	5.4	9.0	6.8
4	108	91	90	86	76	70	69	73	4.7	5.1	8.7	12
5	107	91	90	86	75	70	68	73	4.7	4.9	9.0	19
6	107	90	88	85	76	70	68	73	6.5	4.7	9.0	18
7	106	90	89	85	76	70	68	74	5.8	4.9	8.7	16
8	106	94	89	86	75	70	68	73	5.6	4.9	8.7	16
9	107	93	90	85	75	70	68	73	5.6	4.9	8.4	15
10	109	93	92	83	75	71	67	73	5.1	5.1	8.1	14
11	110	93	91	83	75	70	68	73	5.1	5.4	8.7	15
12	107	93	91	82	73	70	67	73	5.1	5.6	9.6	15
13	106	96	89	82	74	70	66	71	5.1	5.6	9.9	15
14	106	96	88	82	76	68	66	71	5.1	4.9	10	15
15	105	95	87	82	76	68	68	71	5.1	5.1	9.9	15
16	105	95	86	81	73	69	68	71	5.1	64	9.9	15
17	104	95	85	82	73	68	68	70	5.4	44	7.5	15
18	104	94	87	79	73	73	68	68	5.4	27	7.0	15
19	103	94	89	79	73	73	69	68	5.1	27	6.8	15
20	104	95	90	78	73	73	82	67	5.4	13	7.3	15
21	104	94	89	79	73	70	76	68	5.1	6.5	7.0	15
22	103	93	89	79	73	72	73	26	5.4	6.8	7.3	14
23	103	94	88	77	73	71	71	8.7	5.4	6.8	7.3	14
24	100	94	86	77	74	73	69	4.9	5.4	7.0	7.0	13
25	100	95	86	77	74	76	79	4.9	5.8	7.0	6.8	13
26	100	93	86	77	74	75	84	4.9	5.4	7.0	6.8	13
27	99	93	87	77	73	74	79	4.9	4.9	7.0	6.5	91
28	97	93	82	77	72	73	76	4.7	5.4	7.0	6.5	127
29	95	90	82	77	72	71	76	4.7	5.4	7.0	6.8	123
30	94	90	83	77	---	70	77	4.7	5.4	7.0	6.5	124
31	94	---	81	77	---	69	---	4.7	---	8.5	6.5	---
TOTAL	3218	2794	2720	2507	2154	2201	2132	1577.1	157.6	329.6	252.1	826.4
MEAN	104	93.1	87.7	80.9	74.3	71.0	71.1	50.9	5.25	10.6	8.13	27.5
MAX	110	96	92	86	77	76	84	74	6.5	64	11	127
MIN	94	90	81	77	72	68	66	4.7	4.7	4.7	6.5	6.3
AC-FT	6380	5540	5400	4970	4270	4370	4230	3130	313	654	500	1640

CAL YR 1983 TOTAL 21922.7 MEAN 60.1 MAX 111 MIN 3.4 AC-FT 43480
WTR YR 1984 TOTAL 20868.8 MEAN 57.0 MAX 127 MIN 4.7 AC-FT 41390

06679500 NORTH PLATTE RIVER AT MITCHELL, NE

LOCATION.--Lat 41°55'38", long 103°48'48", in NE1/4NE1/4 sec.33, T.23 N., R.56 W., Scotts Bluff County, Hydrologic Unit 10180009. on right bank of main channel 10 ft (revised) downstream from bridge on State Highway 29, 0.5 mi south of Mitchell.

DRAINAGE AREA.--24,300 mi², approximately, of which about 22,300 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--June 1901 to September 1910, May to December 1911, February 1912 to July 1913 (gage heights only), May 1916 to October 1918 (irrigation seasons only), May 1920 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,929.3 ft National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to May 27, 1960. May 27, 1960, to Aug. 24, 1971, at datum 1.00 ft higher.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE (since Glendo project).--27 years (water years 1958-84), 854 ft³/s, 618,700 acre-ft/yr; median of yearly mean discharges, 539 ft³/s, 390,500 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,500 ft³/s June 3, 1909, gage height, 6.45 ft, datum then in use, from graph based on gage readings, from rating curve extended above 17,000 ft³/s; maximum gage height, 7.80 ft May 29, 1984; minimum daily discharge observed, 25 ft³/s Sept. 25-29, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,920 ft³/s June 15, gage height, 7.74 ft; maximum gage height, 7.80 ft May 29; minimum daily discharge, 580 ft³/s Dec 20, 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2090	787	640	660	843	2230	5200	6110	8150	5810	2110	3010
2	1670	782	754	680	852	2260	5400	5910	8130	5910	2310	3060
3	1630	776	749	689	843	2360	5400	5790	8250	5790	2370	3120
4	1560	767	758	671	834	2690	5400	5810	8570	5900	2290	2110
5	1490	764	756	758	829	2980	5600	5910	8690	5480	2180	3200
6	1440	764	735	757	820	3230	5600	6020	8730	5360	2050	3230
7	1370	766	735	727	826	3520	5600	5950	8620	5290	1900	2740
8	1310	765	741	734	839	3590	5600	5980	8280	4850	1850	1970
9	1260	765	731	746	844	3670	5600	6060	8300	3810	1720	1810
10	1250	760	728	747	834	3730	5600	6090	8210	2820	1690	1810
11	1240	760	738	752	837	3800	6000	6230	8310	2110	1660	1780
12	1180	755	754	756	928	3870	5490	6720	8190	1870	1590	1640
13	1120	755	755	747	984	3930	4840	7240	7990	1750	1620	1520
14	1060	750	745	739	1020	3930	4510	7340	8490	1680	1610	1450
15	1010	746	718	725	1120	3960	4410	7710	8570	1620	1580	1370
16	944	736	701	745	1100	3960	4420	7840	8450	2360	1750	1320
17	905	744	680	740	1130	3980	4390	7800	7920	2460	2390	1370
18	885	747	600	740	1140	4040	4310	7970	7850	2190	2580	1350
19	869	749	587	720	1110	4090	4300	8330	7630	1860	2570	1330
20	866	747	580	720	1100	4260	4720	8330	7800	1810	2540	1280
21	872	749	600	720	1170	4670	4900	7900	7370	1840	2520	1230
22	873	754	600	720	1500	4780	4980	7730	7230	1990	2540	1230
23	866	738	580	746	1800	4910	5080	7820	7240	1830	2820	1530
24	853	739	580	753	1930	5200	5090	8370	6770	1820	2780	1700
25	841	751	600	759	2040	5340	5360	8640	6650	1910	2780	1980
26	836	751	600	812	2100	5390	5670	8640	6650	1820	2780	2330
27	827	737	620	822	2130	5390	5700	8600	6310	1770	2730	2520
28	803	740	620	826	2130	5280	5920	8710	6050	1680	2640	2740
29	803	747	640	825	2210	5260	6050	8670	5780	1640	2700	2540
30	793	727	640	820	---	5230	6190	8530	5610	1620	2760	2160
31	773	---	640	833	---	5200	---	8330	---	1950	2890	---
TOTAL	34289	22618	20905	23191	35843	126730	157330	227080	230790	90600	70300	61430
MEAN	1106	754	674	748	1236	4088	5244	7325	7693	2923	2268	2048
MAX	2090	787	758	833	2210	5390	6190	8710	8730	5910	2890	3230
MIN	773	727	580	660	820	2230	4300	5790	5610	1620	1580	1230
AC-FT	68010	44860	41470	46000	71090	251400	312100	450400	457800	179700	139400	121800

CAL YR 1983 TOTAL 1034154 MEAN 2833 MAX 8300 MIN 384 AC-FT 2051000
WTR YR 1984 TOTAL 1101106 MEAN 3008 MAX 8730 MIN 580 AC-FT 2184000

06681500 GERING DRAIN NEAR GERING, NE

LOCATION.--Lat 41°49'22", long 103°37'02", in SE1/4NE1/4 sec.6, T.21 N., R.54 W., Scotts Bluff County, Hydrologic Unit 10180009, on right bank 200 ft downstream from county road bridge, 0.2 mi downstream from bridge on State Highway 92, 1 mi upstream from mouth, and 2 mi east of Gering.

PERIOD OF RECORD.--February 1931 to September 1945, October 1948 to current year.

REVISED RECORDS.--WSP 896: 1935(M). WDR NE-79-1: 1977, 1978 (M).

GAGE.--Water-stage recorder. Datum of gage is 3,852.62 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). See WSP 1918 for history of changes prior to June 27, 1958. June 27, 1958, to Oct. 27, 1970, at datum 4.0 ft higher, Oct. 28, 1970, to Dec. 8, 1975, at datum 2.0 ft higher, Dec. 9, 1975, to Sept. 30, 1980, at datum 1.0 ft higher, all at site 200 ft upstream.

REMARKS.--Records good. Base flow is mainly return water from land irrigated by Fort Laramie Canal.

AVERAGE DISCHARGE.--50 years, 48.3 ft^3/s, 34,990 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,560 ft^3/s June 8, 1958, gage height, 16.0 ft, present datum, from floodmarks, from rating curve extended above 2,200 ft^3/s on basis of slope-area measurements at gage heights 14.67 ft and 16.0 ft present datum; minimum daily, 5 ft^3/s Aug. 13, 16, 19, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 274 ft^3/s July 24, gage height, 2.54 ft; minimum daily, 23 ft^3/s Mar. 5, 15-17, 21-24, Mar. 27-Apr. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	34	30	28	25	25	23	26	148	85	113	137
2	42	34	30	27	25	25	24	25	156	86	110	135
3	40	34	31	27	25	25	24	26	157	83	105	135
4	39	33	32	29	25	24	25	25	177	93	105	134
5	39	33	31	34	25	23	25	25	189	87	106	146
6	38	34	31	30	25	24	25	25	190	93	109	153
7	37	34	30	29	26	24	24	25	194	91	109	148
8	38	35	32	28	26	24	25	25	203	134	105	160
9	37	35	32	28	26	25	24	25	192	106	103	173
10	38	34	32	28	26	25	24	25	192	99	101	174
11	38	34	33	28	26	25	28	25	197	90	99	178
12	38	35	33	28	25	25	25	26	213	89	99	176
13	38	34	32	28	25	25	24	25	209	91	99	189
14	38	33	31	27	26	25	25	25	212	93	95	207
15	37	33	31	27	27	23	25	27	205	91	92	216
16	37	34	30	27	25	23	25	25	200	134	90	225
17	37	33	30	26	26	23	25	28	187	117	88	223
18	37	33	29	26	26	25	24	26	192	100	91	222
19	36	33	30	26	24	24	24	26	208	123	102	218
20	36	33	29	26	25	24	41	26	188	124	115	219
21	36	33	29	26	25	23	33	39	190	124	105	228
22	36	33	29	26	26	23	29	157	190	114	107	214
23	36	32	28	26	25	23	25	201	175	109	115	207
24	34	32	29	26	25	23	25	210	155	121	128	225
25	34	33	29	27	25	24	32	210	163	133	141	241
26	34	32	29	30	25	24	45	195	152	114	146	249
27	34	31	29	27	25	23	29	138	140	117	149	240
28	34	31	28	26	24	23	26	122	126	116	147	206
29	34	31	28	26	25	23	28	133	102	107	136	160
30	35	30	29	25	---	23	27	130	91	110	128	80
31	35	---	29	25	---	23	---	153	---	116	140	---
TOTAL	1175	993	935	847	734	741	808	2199	5293	3290	3478	5618
MEAN	37.9	33.1	30.2	27.3	25.3	23.9	26.9	70.9	176	106	112	187
MAX	73	35	33	34	27	25	45	210	213	134	149	249
MIN	34	30	28	25	24	23	23	25	91	83	88	80
AC-FT	2330	1970	1850	1680	1460	1470	1600	4360	10500	6530	6900	11140

CAL YR 1983	TOTAL	25412	MEAN	69.6	MAX	338	MIN	22	AC-FT	50400
WTR YR 1984	TOTAL	26111	MEAN	71.3	MAX	249	MIN	23	AC-FT	51790

06682000 NORTH PLATTE RIVER NEAR MINATARE, NE

LOCATION.--Main channel gage: Lat 41°47'26", long 103°31'11", in NE1/4SE1/4 sec.13, T.21 N., R.54 W., Scotts Bluff County, Hydrologic Unit 10180009, on left bank 220 ft upstream from bridge on State Highway 326 and 1.8 mi southwest of Minatare. Nine Mile channel gage: Lat 41°47'32", long 103°31'08", in NE1/4SE1/4 sec.13, T.21 N., R.54 W., Scotts Bluff County, Hydrologic Unit 10180009, on left bank 50 ft upstream from bridge on State Highway 326 and 750 ft north of main channel bridge.

DRAINAGE AREA.--24,700 mi^2, approximately, of which about 22,700 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--May to August 1916, May 1917 to September 1918, May to October 1919, April to September 1922, June 1923 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1710, WDR NE-76-1: Drainage area.

GAGE.--Main channel: Water-stage recorder. Datum of gage is 3,810.7 ft National Geodetic Vertical Datum of 1929. Nov. 2, 1966, to July 13, 1976, water-stage recorder at datum 1.00 ft higher. See WDR NE-72 for history of changes prior to Nov. 2, 1966.

Nine Mile channel: Water-stage recorder. Datum of gage is 3,812.3 ft National Geodetic Vertical Datum of 1929. See WDR NE-72 for history of changes prior to Aug. 25, 1971.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. River flows in two channels for which separate records are computed; figures given herein represent combined discharge.

AVERAGE DISCHARGE (since Glendo project).--27 years (water years 1958-84), 1,094 ft^3/s, 792,600 acre-ft/yr; median of yearly mean discharges, 794 ft^3/s, 575,300 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,500 ft^3/s July 2, 1917, from graph based on mean daily discharge and discharge measurement published by State engineer of Nebraska; minimum daily, 11 ft^3/s Aug. 16-18, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 18, 1921, may have been greater than flood of July 2, 1917.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,820 ft^3/s June 19; minimum daily, 560 ft^3/s Dec. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2680	974	1040	1020	1000	2150	5420	6450	8310	5450	2070	3100
2	2270	974	1040	1040	1020	2150	5520	6010	8160	5650	2200	3180
3	2070	983	1040	1040	1020	2210	5540	5820	8110	5630	2220	3250
4	2040	991	1040	1020	1040	2490	5590	5710	8350	5770	2200	3220
5	1950	991	1020	991	1040	2880	5620	5720	8670	5430	2110	3320
6	1860	1000	1000	1040	1040	3080	5680	5790	8740	5260	2010	3430
7	1750	1010	991	983	1040	3380	5750	5780	8700	5200	1900	3210
8	1640	1040	1010	983	1050	3490	5770	5790	8590	5010	1810	2520
9	1570	1080	1000	1000	1030	3610	5790	5810	8520	4190	1730	2180
10	1520	1070	991	1010	1010	3720	5800	5850	8490	3050	1670	2070
11	1490	1070	983	1000	991	3830	6020	5870	8480	2420	1630	2040
12	1450	1080	1020	957	1030	3870	5890	6220	8520	2110	1570	1980
13	1400	1090	1040	923	1160	3870	5100	6760	8330	1910	1540	1890
14	1350	1100	1020	881	1240	3920	4630	7430	8580	1730	1540	1810
15	1340	1080	974	860	1360	3970	4440	8030	8840	1670	1490	1770
16	1290	1070	923	840	1360	3980	4420	8180	9170	2170	1490	1740
17	1280	1070	889	840	1370	3980	4390	8030	8590	2620	2070	1770
18	1250	1060	864	760	1380	4080	4340	7970	8300	2230	2580	1760
19	1200	1060	730	694	1350	4200	4320	8080	9020	1920	2720	1710
20	1170	1050	590	668	1350	4200	4950	8150	8350	1700	2730	1650
21	1150	1050	560	719	1370	4610	5270	8040	8000	1700	2750	1590
22	1110	1020	600	728	1510	4750	5230	7800	7490	1820	2690	1540
23	1070	980	700	753	1730	4820	5360	7830	7480	1770	2950	1710
24	1040	1000	660	800	1880	5100	5350	8130	6820	1700	3080	2000
25	1010	1020	680	840	1980	5260	5650	8730	6510	1870	3080	2260
26	1000	1020	700	880	2050	5390	6050	9020	6520	1810	3110	2630
27	991	1040	800	900	2070	5280	6060	8900	6170	1740	3120	2950
28	974	1040	860	920	2080	5210	6060	8910	5800	1700	3000	3280
29	957	1040	1000	960	2140	5210	6320	8870	5570	1620	2950	3220
30	966	1040	1000	980	---	5270	6400	8870	5280	1590	2930	2760
31	966	---	1020	1000	---	5380	---	8650	---	1740	3010	---
TOTAL	43804	31093	27785	28030	39691	125340	162730	227200	236460	90180	71950	71540
MEAN	1413	1036	896	904	1369	4043	5424	7329	7882	2909	2321	2385
MAX	2680	1100	1040	1040	2140	5390	6400	9020	9170	5770	3120	3430
MIN	957	974	560	668	991	2150	4320	5710	5280	1590	1490	1540
AC-FT	86890	61670	55110	55600	78730	248600	322800	450700	469000	178900	142700	141900

CAL YR 1983 TOTAL 1128623 MEAN 3092 MAX 8640 MIN 560 AC-FT 2239000
WTR YR 1984 TOTAL 1155803 MEAN 3158 MAX 9170 MIN 560 AC-FT 2293000

06682505 NORTH PLATTE RIVER AT MC GREW, NE

LOCATION.--Lat 41°45'42", long 103°25'02", in SW1/4 sec.25, T.21 N., R.53 W., Scotts Bluff County, Hydrologic Unit 10180009, at bridge on county road 1.2 mi north of State Highway 92, 0.3 mi downstream from Ninemile Creek and 0.9 mi north of McGrew.

PERIOD OF RECORD.--Chemical analyses: June 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT 24...	1100	1270	912	8.0	12.0	9.6	19	110	540	290	78
NOV 14...	1000	1080	860	8.0	7.0	10.7	18	150	1000	300	83
DEC 12...	0930	1140	943	8.0	2.0	12.0	22	190	K20000	300	81
JAN 09...	1000	1120	830	8.0	5.0	10.6	21	220	8000	290	81
FEB 13...	0930	1300	840	8.0	4.0	10.0	26	120	1300	290	79
MAR 12...	0945	3840	800	8.1	5.0	11.3	27	K44	3100	280	71
APR 16...	0930	4690	775	8.2	9.0	10.3	27	K35	1200	270	71
MAY 14...	0930	6990	760	8.0	15.0	9.0	40	560	720	250	62
JUN 11...	1000	8390	590	7.8	15.0	8.6	42	190	380	230	60
JUL 16...	0930	2890	700	7.8	22.0	8.0	72	4300	K22000	210	57
AUG 13...	0930	1690	780	8.0	20.0	8.3	40	490	1700	250	69
SEP 10...	0930	2160	810	8.0	17.5	9.0	60	140	2300	280	74

K Results based on colony count outside acceptable range (non-ideal colony count).

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 24...	22	220	22	21	2.6	.080	1.1	1.2	3.8	.070	4.5
NOV 14...	22	210	21	30	2.5	.190	1.1	1.3	3.8	.060	4.5
DEC 12...	23	200	21	47	2.6	.180	1.5	1.7	4.3	.030	4.4
JAN 09...	22	210	20	66	2.6	.160	.74	.90	3.5	.130	4.8
FEB 13...	22	190	19	120	1.9	.060	1.0	1.1	3.0	.160	6.8
MAR 12...	25	210	16	161	.80	.110	.59	.70	1.5	.150	7.0
APR 16...	23	190	16	73	.70	.070	.83	.90	1.6	.150	5.9
MAY 14...	22	170	14	420	.30	.050	.25	.30	.60	.180	8.5
JUN 11...	19	140	21	100	.30	.010	1.4	1.4	1.7	.130	8.2
JUL 16...	16	170	12	886	1.1	.040	2.5	2.5	3.6	.800	18
AUG 13...	20	180	18	139	1.0	.080	1.3	1.4	2.4	.220	10
SEP 10...	22	190	15	140	1.3	.050	.95	1.0	2.3	.170	6.5

06682505 NORTH PLATTE RIVER AT MC GREW, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
NOV										
14...	1000	46	95	2	9.3	252	.50	34	630	.85
FEB										
13...	0930	40	76	2	7.6	248	.50	28	570	.78
MAY										
14...	0930	69	55	2	5.2	177	.40	13	450	.61
AUG										
13...	0930	53	70	2	7.6	202	.50	27	510	.70

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
NOV										
14...	1830	2.6	.020	6	100	140	1	<10	490	1300
FEB										
13...	2000	1.9	.030	--	--	120	--	--	--	--
MAY										
14...	8450	.47	.070	3	300	90	1	<10	360	5700
AUG										
13...	2340	1.1	.040	--	--	120	--	--	--	--

DATE	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV										
14...	1300	18	26	100	90	13	<.1	4	<1	430
FEB										
13...	--	10	--	--	--	9	--	--	--	--
MAY										
14...	5700	9	54	230	220	6	<.1	3	<1	200
AUG										
13...	--	340	--	--	--	89	--	--	--	--

06684500 NORTH PLATTE RIVER AT BRIDGEPORT, NE

LOCATION.--Main channel gage: Lat 41°40'54", long 103°05'52", in NW1/4NW1/4 sec.28, T.20 N., R.50 W., Morrill County, Hydrologic Unit 10180009, on left bank 0.3 mi upstream from bridge on U.S. Highway 26, 0.8 mi north of Bridgeport. Browns Creek channel gage: Lat 41°40'55", long 103°05'53", in NW1/4NW1/4 sec.28, T.20 N., R.50 W., Morrill County, on right (revised) bank 0.2 mi upstream from culvert on U.S. Highway 26 and 0.8 mi north of Bridgeport.

DRAINAGE AREA.--25,300 mi², approximately, of which about 23,300 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--June 1896 to October 1900 (no winter records most years), May 1902 to November 1906, June to August 1915, May 1916 to current year. Monthly discharge only for some years, published in WSP 1310. Published as "near Camp Clark" 1896-1900.

REVISED RECORDS.--WSP 1390: 1897, 1915. WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Main channel: Water-stage recorder. Datum of gage is 3,656.14 ft National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Oct. 7, 1927. Oct. 7, 1927 to July 16, 1978 at downstream side of bridge on U.S. Highway 26, 0.3 mi downstream at same datum.

Browns Creek channel: Water-stage recorder. Datum of gage is 3,663.51 ft National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to June 1, 1943. June 1, 1943 to Nov. 17, 1983 on left bank at same location and datum.

REMARKS.--Records fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. River flows in two independently rated channels for which separate records are computed; figures herein represent combined discharge.

AVERAGE DISCHARGE (since Glendo project).--27 years (water years 1958-84), 1,382 ft³/s, 1,001,000 acre-ft/yr; median of yearly mean of discharges, 1,055 ft³/s, 764,300 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,900 ft³/s June 26, 1899, gage height, 5.39 ft, site and datum then in use, from graph based on gage readings; minimum daily, 55 ft³/s May 28, 1934, Aug. 15, 1940, but may have been less during periods of no record for Browns Creek channel.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,620 ft³/s June 20; minimum daily, 1,000 ft³/s Dec. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2730	1540	1300	1250	1340	2630	5300	6020	8330	5890	2110	3390
2	2440	1550	1300	1250	1350	2620	5350	5980	8100	5970	2220	3480
3	2270	1530	1350	1200	1360	2600	5270	5730	8030	5920	2360	3530
4	2260	1500	1350	1200	1450	2700	5230	5630	8550	6010	2430	3510
5	2260	1390	1350	1250	1520	2970	5330	5730	8440	6070	2410	3520
6	2190	1360	1460	1300	1520	3200	5390	5790	8790	5650	2370	3580
7	2140	1390	1420	1350	1490	3360	5460	5850	8740	5540	2230	3600
8	2060	1420	1420	1330	1460	3540	5500	5900	8560	5490	1970	3310
9	2030	1470	1410	1350	1460	3790	5540	5860	8360	5260	1910	2930
10	1980	1450	1410	1330	1460	3810	5550	5850	8250	4170	1880	2750
11	1980	1390	1380	1300	1500	3920	5790	5900	8310	3320	1820	2660
12	1960	1360	1360	1250	1550	4000	5720	5990	8440	2840	1780	2620
13	1880	1360	1370	1210	1620	4040	5230	6190	8470	2580	1760	2510
14	1850	1320	1340	1190	1580	4140	4700	6630	8130	2410	1800	2450
15	1820	1360	1320	1240	1720	4180	4420	7200	8500	2280	1780	2400
16	1780	1350	1290	1250	1790	4170	4250	7450	9030	2310	1770	2400
17	1790	1320	1270	1290	1850	4170	4190	7520	9330	2770	1960	2460
18	1770	1320	1240	1200	1910	4090	4160	7430	8680	2740	2530	2490
19	1740	1300	1000	1200	1930	4290	4150	7720	8560	2570	2810	2400
20	1690	1320	1100	1200	1880	4360	4660	7730	9190	2290	3020	2320
21	1630	1300	1160	1200	1790	4540	5180	7860	8620	2210	3040	2220
22	1620	1230	1160	1200	1890	4790	5190	7730	8070	2160	3090	2130
23	1610	1190	1160	1300	2090	4820	5200	7520	7720	2170	3230	2060
24	1610	1170	1140	1350	2260	4980	5220	7620	7480	2130	3470	2230
25	1590	1180	1140	1400	2370	5230	5450	8070	6990	2230	3530	2450
26	1620	1220	1140	1400	2460	5390	5810	8550	6830	2210	3510	2750
27	1570	1260	1140	1400	2560	5370	5950	8730	6720	2140	3450	3090
28	1560	1250	1140	1360	2600	5270	5730	8710	6360	2030	3250	3400
29	1510	1200	1140	1280	2330	5170	5740	8730	5980	1940	3140	3440
30	1480	1200	1140	1260	---	5060	5950	8720	5670	1850	3120	3280
31	1510	---	1200	1320	---	5230	---	8640	---	1840	3270	---
TOTAL	57930	40200	39100	39610	52090	128430	156610	218980	241230	104990	79020	85360
MEAN	1869	1340	1261	1278	1796	4143	5220	7064	8041	3387	2549	2845
MAX	2730	1550	1460	1400	2600	5390	5950	8730	9330	6070	3530	3600
MIN	1480	1170	1000	1190	1340	2600	4150	5630	5670	1840	1760	2060
AC-FT	114900	79740	77550	78570	103300	254700	310600	434300	478500	208200	156700	169300

CAL YR 1983 TOTAL 1165093 MEAN 3192 MAX 8500 MIN 724 AC-FT 2311000
WTR YR 1984 TOTAL 1243550 MEAN 3398 MAX 9330 MIN 1000 AC-FT 2467000

06685000 PUMPKIN CREEK NEAR BRIDGEPORT, NE

LOCATION.--Lat 41°37'38", long 103°02'10", in SW1/4 sec.12, T.19 N., R.50 W., Morrill County, Hydrologic Unit 10180013, on right bank 250 ft downstream from bridge on U.S. Highway 385 and State Highway 92, 0.5 mi upstream from mouth, and 4 mi southeast of Bridgeport.

DRAINAGE AREA.--1,020 mi², approximately.

PERIOD OF RECORD.--February 1931 to current year.

REVISED RECORDS.--WSP 1390: 1932, 1934(M). 1935, 1936(M), 1938-39. WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Sheet piling control since December 1964. Datum of gage is 3,635.99 ft National Geodetic Vertical Datum of 1929. Prior to June 25, 1934, nonrecording gage on downstream side of bridge 240 ft upstream and June 25, 1934, to May 18, 1936, water-stage recorder at upstream side of bridge 260 ft upstream, both at datum 0.29 ft higher. May 19, 1936, to June 8, 1965, water-stage recorder, June 9, 1965, to Sept. 1, 1965, non-recording gage, and Sept. 2, 1965, to Sept. 18, 1980, water-stage recorder, all on left bank 250 ft downstream from bridge at present datum.

REMARKS.--Records good. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--53 years, 28.1 ft³/s, 20,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,880 ft³/s June 9, 1965, gage height, 9.98 ft, from floodmark, from rating curve extended above 3,500 ft³/s on basis of rating extension for main channel and determination of flow over road; no flow July 22, 24-26, Aug. 5-8, 1975; July 9, 11, 22, 23, 28, 29, 1976; July 2-6, Aug. 2, 1977; June 25-July 22, Aug. 2-7, 1981; July 26, 27, Aug. 7-11, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 65 ft³/s May 3, gage height, 2.08 ft; maximum gage height, 2.60 ft Dec. 16, backwater from ice; minimum daily discharge, 0.68 ft³/s July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOPER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	10	14	17	17	18	21	26	31	4.2	3.9	24
2	18	10	14	19	15	19	22	26	29	3.4	5.3	25
3	18	10	14	21	15	19	21	34	16	3.8	9.5	29
4	19	10	14	20	15	19	21	43	20	15	10	31
5	12	10	14	19	15	18	21	41	33	16	9.6	31
6	10	11	14	16	15	18	21	43	34	16	11	30
7	10	11	15	21	15	17	24	43	33	7.9	11	29
8	9.6	11	14	21	15	17	23	43	34	7.5	11	28
9	9.6	12	14	18	15	20	22	42	34	7.4	9.7	28
10	9.6	12	14	18	15	19	21	40	34	7.5	8.7	27
11	9.6	12	13	19	15	19	22	40	33	7.1	8.7	27
12	9.6	12	14	19	16	19	22	40	32	5.0	8.5	27
13	9.6	12	15	19	16	18	21	37	32	.94	7.7	27
14	9.6	12	15	21	16	18	22	34	33	.89	7.4	29
15	10	12	13	18	17	18	21	34	29	.89	6.1	29
16	10	13	10	14	18	18	21	38	29	.89	3.3	31
17	10	12	10	11	18	19	21	38	29	.86	3.1	34
18	10	12	10	9.0	16	21	21	33	29	.68	3.2	34
19	10	13	12	11	16	21	21	33	30	11	3.2	32
20	10	13	15	11	18	21	24	33	34	9.1	6.4	32
21	10	13	15	11	18	21	26	30	33	8.7	14	32
22	10	13	14	13	18	21	26	30	33	8.7	12	31
23	10	11	13	15	19	21	25	30	30	8.7	12	31
24	10	11	12	20	19	21	24	22	26	7.9	12	31
25	9.6	10	12	25	19	21	24	19	19	7.1	11	31
26	10	11	11	29	19	22	26	27	15	7.5	11	30
27	10	12	10	26	19	21	26	38	13	7.9	14	30
28	10	13	10	26	19	21	26	37	8.1	7.5	21	31
29	10	13	10	17	18	21	26	36	1.3	7.5	21	32
30	10	13	11	17	---	21	26	34	2.2	6.0	22	31
31	10	---	14	15	---	21	---	34	---	4.3	23	---
TOTAL	341.8	350	400	556.0	486	608	688	1078	788.6	207.85	320.3	894
MEAN	11.0	11.7	12.9	17.9	16.8	19.6	22.9	34.8	26.3	6.70	10.3	29.8
MAX	19	13	15	29	19	22	26	43	34	16	23	34
MIN	9.6	10	10	9.0	15	17	21	19	1.3	.68	3.1	24
AC-FT	678	694	793	1100	964	1210	1360	2140	1560	412	635	1770

CAL YR 1983	TOTAL	7119.2	MEAN	19.5	MAX	60	MIN	2.0	AC-FT	14120
WTR YR 1984	TOTAL	6718.55	MEAN	18.4	MAX	43	MIN	.68	AC-FT	13330

06686000 NORTH PLATTE RIVER AT LISCO, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°29'18", long 102°37'25", in NW1/4SE1/4 sec.33, T.18 N., R.46 W., Garden County, Hydrologic Unit 10180009, near right bank on downstream side of pier of highway bridge, 0.5 mi south of Lisco.

DRAINAGE AREA.--26,700 mi^2, approximately, of which about 24,700 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to September 1916, June to October 1917, September 1931 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,474.5 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 8, 1931, nonrecording gage at present site at different datum and Sept. 8, 1931, to May 3, 1932, at present site at datum 1.0 ft higher. May 4, 1932, to May 28, 1974, water-stage recorder at present site at datum 1.0 ft higher.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE (since Glendo project).--27 years (water years 1958-84), 1,464 ft^3/s, 1,061,000 acre-ft/yr; median of yearly mean discharges, 1,160 ft^3/s, 840,400 acre-ft/yr. Figures are unadjusted for storage and diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,100 ft^3/s June 27, 29, 1917, from graph based on daily gage readings, from rating curve extended above 15,000 ft^3/s; minimum daily, 8 ft^3/s Aug. 4, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,880 ft^3/s June 18, gage height, 4.37 ft; maximum gage height, 4.65 ft Jan. 14, backwater from ice; minimum daily discharge, 1,100 ft^3/s Dec. 19-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3070	1600	1500	1500	1600	2640	5280	6060	7720	5560	1980	3160
2	3030	1600	1500	1550	1600	2640	5560	6060	7320	5560	2280	3320
3	2720	1620	1500	1600	1600	2620	5630	5980	6950	5640	2440	3410
4	2500	1620	1500	1600	1600	2620	5590	5660	7320	5670	2710	3530
5	2440	1590	1550	1600	1590	2770	5660	5700	7720	5700	2600	3530
6	2330	1560	1600	1650	1630	3010	5740	5740	7720	5560	2540	3620
7	2210	1500	1600	1700	1630	3150	5780	5900	8020	5310	2420	3740
8	2140	1500	1650	1700	1650	3370	5780	5820	8020	5230	2150	3600
9	2090	1510	1650	1650	1630	3580	5740	5780	7840	5230	1900	3140
10	2090	1480	1650	1600	1630	3670	5700	5780	8110	4770	1670	2900
11	2090	1500	1650	1410	1650	3730	5820	5700	8240	3580	1620	2830
12	2030	1500	1600	1340	1560	3840	5820	5900	8310	2900	1600	2830
13	1980	1490	1590	1330	1600	3890	5740	5900	8310	2500	1600	2750
14	1950	1480	1530	1300	1710	3950	5280	6020	8310	2280	1690	2770
15	1980	1480	1470	1350	1820	3970	4820	6600	8010	2110	1740	2600
16	1910	1480	1370	1400	1820	3970	4620	7050	8290	2050	1710	2540
17	1830	1500	1330	1400	1830	4000	4570	7540	8540	2560	1670	2540
18	1820	1560	1200	1300	1850	4060	4550	7770	8710	3010	2110	2520
19	1800	1540	1100	1200	1830	4090	4570	7430	8270	2620	2600	2400
20	1770	1540	1100	1200	1850	4060	5170	7490	8180	2240	2790	2220
21	1740	1570	1100	1300	1880	4090	5740	7490	8510	2010	2940	2090
22	1720	1590	1200	1400	1930	4500	5630	7430	8010	1980	3030	2050
23	1690	1570	1200	1500	2030	4700	5350	7160	7500	2010	3050	2050
24	1680	1560	1200	1600	2210	4790	5310	6950	7250	2000	3160	2220
25	1660	1560	1250	1700	2300	5000	5310	6950	7060	2220	3230	2520
26	1630	1530	1300	1700	2420	5350	5820	7430	6600	2200	3230	2920
27	1630	1400	1350	1750	2460	5350	6020	8140	6390	2090	3250	3360
28	1620	1450	1400	1750	2480	5170	5860	8080	6190	1980	3230	3600
29	1620	1500	1500	1700	2570	5070	5820	7960	5810	1900	3030	3830
30	1590	1500	1500	1650	---	5070	6020	7900	5530	1800	2940	3740
31	1600	---	1500	1650	---	5140	---	7840	---	1850	3010	---
TOTAL	61960	45880	44140	47080	53960	123860	164300	209210	228760	102120	75920	88330
MEAN	1999	1529	1424	1519	1861	3995	5477	6749	7625	3294	2449	2944
MAX	3070	1620	1650	1750	2570	5350	6020	8140	8710	5700	3250	3830
MIN	1590	1400	1100	1200	1560	2620	4550	5660	5530	1800	1600	2050
AC-FT	122900	91000	87550	93380	107000	245700	325900	415000	453700	202600	150600	175200

CAL YR 1983 TOTAL 1181286 MEAN 3236 MAX 8550 MIN 766 AC-FT 2343000
WTR YR 1984 TOTAL 1245520 MEAN 3403 MAX 8710 MIN 1100 AC-FT 2470000

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1970 to September 1981.
WATER TEMPERATURES: October 1970 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,280 micromhos Feb. 11, 1981; minimum daily, 275 micromhos Mar. 1, 1978.
WATER TEMPERATURES: Maximum, 31.0°C July 19, 1972; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT											
25...	1100	1640	882	8.2	9.0	681	--	10.4	24	34	210
NOV											
15...	1045	1500	904	8.4	5.0	673	7.0	11.6	22	170	720
DEC											
13...	1000	1570	930	8.2	2.0	663	--	11.9	24	80	5100
JAN											
10...	0945	1520	860	7.9	1.0	670	26	11.8	26	130	5100
FEB											
14...	1100	1690	852	8.0	6.0	655	--	11.2	31	K75	1000
MAR											
13...	1215	3860	839	8.1	8.0	666	60	10.3	40	77	880
APR											
17...	1100	4500	805	8.1	13.0	656	--	10.0	28	59	170
MAY											
15...	1300	6530	758	8.1	21.0	664	36	9.2	33	120	180
JUN											
12...	1300	8250	663	8.0	22.0	667	--	9.0	46	120	660
JUL											
17...	0955	2500	720	8.1	22.5	675	150	8.0	51	1700	2000
AUG											
14...	1000	1680	780	8.0	22.0	670	--	8.3	30	240	220
SEP											
11...	1100	2820	816	8.1	17.0	664	50	8.5	40	580	470

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT										
25...	290	--	81	21	88	2	--	--	200	21
NOV										
15...	290	43	82	21	88	2	9.4	250	200	20
DEC										
13...	310	--	88	22	93	2	--	--	230	20
JAN										
10...	280	[illegible]	79	20	87	2	8.6	246	210	15
FEB										
14...	300	--	84	21	77	2	--	--	190	20
MAR										
13...	280	70	74	23	70	2	6.8	211	210	16
APR										
17...	260	--	66	22	66	2	--	--	180	17
MAY										
15...	270	70	68	23	60	2	7.5	196	210	15
JUN										
12...	220	--	57	18	53	2	--	--	150	12
JUL										
17...	230	47	62	18	61	2	6.7	183	170	11
AUG										
14...	270	--	75	21	73	2	--	--	180	16
SEP										
11...	260	55	70	21	75	2	7.5	207	200	16

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 25...	--	--	--	--	--	--	52	--	--	2.4
NOV 15...	.50	35	617	610	.84	2500	36	2.4	.020	2.4
DEC 13...	--	--	--	--	--	--	50	--	--	2.5
JAN 10...	.50	34	604	600	.82	2480	66	2.5	.020	2.5
FEB 14...	--	--	--	--	--	--	106	--	--	2.1
MAR 13...	.50	15	555	550	.75	5780	193	.99	.010	1.0
APR 17...	--	--	--	--	--	--	94	--	--	.70
MAY 15...	.50	15	506	520	.69	8920	193	--	<.010	.30
JUN 12...	--	--	--	--	--	--	70	--	--	.20
JUL 17...	.40	23	465	460	.63	3140	382	.79	.010	.80
AUG 14...	--	--	--	--	--	--	147	--	--	1.0
SEP 11...	.50	26	540	540	.73	4110	93	1.3	.020	1.3

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 25...	--	.080	--	1.6	1.7	4.1	.170	--	--	6.2
NOV 15...	2.6	.050	.110	1.5	1.5	3.9	.070	.020	<.010	4.1
DEC 13...	--	.090	--	1.3	1.4	3.9	.060	--	--	3.5
JAN 10...	2.2	.060	.090	.64	.70	3.2	.150	<.010	.030	5.8
FEB 14...	--	.010	--	.99	1.0	3.1	.150	--	--	6.3
MAR 13...	1.1	.070	.130	1.0	1.1	2.1	.300	.030	.070	8.1
APR 17...	--	.020	--	.76	.80	1.5	.110	--	--	6.6
MAY 15...	.42	.030	.190	.97	1.0	1.3	.170	.020	.020	11
JUN 12...	--	.040	--	.76	.80	1.0	.070	--	--	9.1
JUL 17...	.82	.030	.110	.97	1.0	1.8	.350	.040	.010	12
AUG 14...	--	.060	--	1.4	1.5	2.5	.190	--	--	10
SEP 11...	1.4	<.010	.020	--	.90	2.2	.130	<.010	.020	--

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)
NOV 15...	1045	20	6	7	<100	100	<.5	<1	<1	30	30
MAR 13...	1215	30	--	3	--	67	<.5	--	<1	--	20
MAY 15...	1300	30	3	--	200	55	.5	<1	3	<10	<1
JUL 17...	0955	30	--	5	--	66	1.0	--	<1	--	30

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)
NOV 15...	<3	11	2	1200	10	6	<1	48	90	5	.5
MAR 13...	<3	--	5	--	13	--	<1	38	--	5	--
MAY 15...	<3	110	11	4000	26	42	<1	33	210	13	<.1
JUL 17...	<3	--	8	--	47	--	<1	41	--	8	--

DATE	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
NOV 15...	<.1	<10	7	4	4	<1	<1	860	9	30	13
MAR 13...	<.1	<10	<1	--	4	--	<1	680	<6	--	16
MAY 15...	<.1	10	3	3	3	<1	1	640	7	60	21
JUL 17...	<.1	<10	<1	--	3	--	<1	570	7	--	15

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	TEMPER-ATURE (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
NOV 15...	1045	1500	5.0	20	81	--	--
JAN 10...	0945	1520	1.0	265	1090	--	--
MAR 13...	1215	3860	8.0	514	5360	15	17
MAY 15...	1300	6530	21.0	354	6240	--	--
JUL 17...	0955	2500	22.5	660	4450	--	--
SEP 11...	1100	2820	17.0	329	2510	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 15...	--	--	--	--	--	--	91
JAN 10...	--	46	50	66	100	--	--
MAR 13...	24	44	60	81	94	100	--
MAY 15...	--	28	41	73	99	100	--
JUL 17...	--	--	--	--	--	--	67
SEP 11...	--	--	--	--	--	--	56

06687000 BLUE CREEK NEAR LEWELLEN, NE

LOCATION (REVISED).--Lat 41°20'08", long 102°10'21", in NE1/4 sec.30, T.16 N., R.42 W., Garden County, Hydrologic Unit 10180009, on left bank 5 ft downstream from county highway bridge, 0.5 mi downstream from bridge on U.S. Highway 26, 0.8 mi upstream from mouth, and 1.5 mi west of Lewellen.

DRAINAGE AREA.--1,190 mi^2, revised, approximately, of which about 80 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to current year.

REVISED RECORDS.--WSP 1310: 1941(M). WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,310.04 ft National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Apr. 10, 1958. Apr. 10, 1958 to Sept. 17, 1983, recording gage at site 125 ft downstream at same datum.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--54 years, 69.4 ft^3/s, 50,280 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 720 ft^3/s May 20, 1938, gage height, 6.46 ft, present datum, from rating curve extended above 500 ft^3/s; maximum gage height, 6.93 ft, present datum, Dec. 21, 1945, backwater from ice; no flow for short periods in 1940, 1947, 1957, 1960-61, 1963, 1971, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 152 ft^3/s Apr. 21, gage height, 4.26 ft; maximum gage height, 6.08 ft Dec. 17, backwater from ice; minimum daily discharge, 0.12 ft^3/s Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	87	66	110	111	107	93	92	83	3.6	2.9	1.9
2	37	87	90	110	111	107	98	92	77	6.0	2.7	1.9
3	44	88	100	104	107	105	100	115	69	1.9	1.2	2.8
4	45	87	116	108	104	101	102	105	78	.96	.96	2.2
5	44	86	116	116	104	100	119	101	77	.78	.51	.44
6	42	87	120	114	104	100	112	97	71	.64	.40	.12
7	46	86	122	112	110	100	101	97	61	.40	.40	.15
8	52	86	125	104	110	100	99	94	66	.40	.32	.15
9	65	89	130	96	108	101	91	94	68	.40	.32	.25
10	76	89	130	94	102	102	91	92	74	.64	.25	5.8
11	85	87	135	94	104	104	93	92	66	6.8	.25	10
12	87	87	140	88	93	104	91	99	65	3.7	.25	7.4
13	87	87	120	86	94	106	84	96	64	.96	.25	3.2
14	86	87	94	82	100	105	82	91	62	.78	.25	2.6
15	85	85	97	80	102	102	83	86	58	.64	.25	5.6
16	86	86	105	76	93	96	83	85	61	.78	.25	6.0
17	85	86	100	72	89	96	86	88	64	1.4	.80	9.0
18	86	87	90	70	93	97	84	92	56	1.7	.51	10
19	86	85	85	72	94	100	84	108	48	1.2	.51	9.5
20	85	84	80	76	97	100	102	119	46	.78	.25	7.4
21	84	84	78	80	100	96	145	105	41	.96	.15	.96
22	85	84	76	90	104	94	124	100	41	.96	.19	1.2
23	85	82	74	94	102	91	99	98	38	.78	.19	5.6
24	83	81	72	98	102	94	94	93	30	1.2	.19	12
25	83	84	68	110	102	96	93	93	16	.51	1.0	23
26	84	84	74	130	101	101	93	91	4.9	.51	3.7	27
27	84	35	82	150	102	98	88	94	2.1	.51	2.4	28
28	85	10	86	150	101	90	85	92	.78	.64	.51	32
29	84	10	90	130	102	88	91	86	1.2	1.1	.51	36
30	85	50	100	105	---	92	92	83	.40	.96	.78	39
31	86	---	100	108	---	93	---	82	---	.78	1.9	---
TOTAL	2274	2337	3061	3109	2946	3066	2882	2952	1489.38	43.37	25.05	291.17
MEAN	73.4	77.9	98.7	100	102	98.9	96.1	95.2	49.6	1.40	.81	9.71
MAX	87	89	140	150	111	107	145	119	83	6.8	3.7	39
MIN	37	10	66	70	89	88	82	82	.40	.40	.15	.12
AC-FT	4510	4640	6070	6170	5840	6080	5720	5860	2950	86	50	578

CAL YR 1983 TOTAL 25630.57 MEAN 70.2 MAX 189 MIN .42 AC-FT 50840
WTR YR 1984 TOTAL 24475.97 MEAN 66.9 MAX 150 MIN .12 AC-FT 48550

06687500 NORTH PLATTE RIVER AT LEWELLEN, NE

LOCATION (REVISED).--Lat 41°19'01", long 102°07'32", in SE1/4NW1/4 sec.34, T.16 N., R.42 W., Garden County, Hydrologic Unit 10180009, on left bank 19 ft downstream from bridge on State Highway 26, 1 mi southeast of Lewellen, and approximately 0.5 mi upstream from high-water line of Lake McConaughy.

DRAINAGE AREA.--28,600 mi^2, approximately, of which about 25,400 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--July to September 1931, December 1940 to current year.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,285.88 ft National Geodetic Vertical Datum of 1929. July to September 1931, nonrecording gage at site 0.9 mi upstream at different datum. December 1940 to Sept. 19, 1973, water-stage recorders on two channels at present site at datum 1.28 ft lower. Sept. 21, 1973 to July 13, 1984, water-stage recorder at site 0.9 mi upstream at datum 4.28 ft higher.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE (since Glendo project).--27 years (water years 1958-84), 1,564 ft^3/s, 1,133,000 acre-ft/yr; median of yearly mean discharges, 1,270 ft^3/s, 920,100 acre-ft/yr. Figures are unadjusted for storage and diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft^3/s June 4, 1971; minimum daily, 44 ft^3/s July 13, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,770 ft^3/s June 19, gage height, 7.65 ft; maximum gage height, 7.74 ft Nov. 30, backwater from ice; minimum daily discharge, 1,000 ft^3/s Nov. 29 to Dec. 1, Jan. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3200	1620	1000	1600	2200	2800	5880	6130	8920	5800	1950	3180
2	3260	1580	1200	1800	2200	2800	5880	6180	8910	5880	2060	3260
3	3260	1580	1500	2000	2100	2660	5920	6220	8680	5840	2190	3360
4	2770	1640	2000	2000	2100	2660	5920	5920	8620	5840	2300	3450
5	2580	1680	2100	2000	2100	2800	5880	5760	8680	5800	2370	3480
6	2440	1710	2000	1900	2000	2990	5880	5640	8740	5880	2330	3500
7	2220	1640	2000	1900	2000	3110	5840	5640	8740	5680	2300	3520
8	2240	1640	2000	1900	2000	3290	5840	5760	8970	5510	2190	3570
9	2220	1680	2000	1800	2000	3640	5680	5760	9220	5510	2040	3380
10	2220	1440	2000	1800	1900	3600	5640	5640	8970	5390	1940	2960
11	2220	1480	2000	1700	1900	3930	5640	5760	8680	4630	1850	2700
12	2220	1660	1900	1700	1900	3970	5720	5800	8680	3730	1780	2640
13	2120	1680	1900	1650	1880	4000	5920	5840	8910	3160	1740	2610
14	1950	1710	1900	1650	1860	3970	5880	5760	8850	2800	1690	2510
15	2000	1770	1800	1500	1840	3970	5360	6220	9030	2430	1740	2470
16	1930	1680	1700	1400	1980	3900	5010	6740	8790	2270	1770	2450
17	1880	1600	1600	1200	2090	4030	4860	7060	9090	2280	1730	2430
18	1820	1520	1300	1100	2190	4100	4780	7470	8790	2510	1800	2460
19	1860	1500	1200	1000	2220	4170	4710	7810	9650	2590	2240	2640
20	1790	1540	1250	1000	2170	4280	5280	8000	9340	2310	2590	2390
21	1750	1580	1250	1200	2140	4310	6050	7760	9220	2150	2830	2240
22	1640	1580	1250	1400	2220	4380	6050	7860	9400	2040	2910	2150
23	1640	1640	1300	1500	2290	4820	5880	7900	8910	1980	2930	2100
24	1640	1560	1300	1600	2440	5040	5640	7900	8160	2030	2980	2090
25	1640	1660	1300	1700	2710	5240	5590	7760	7860	2090	3140	2250
26	1680	1600	1300	1800	2880	5760	5590	7810	7620	2150	3160	2480
27	1620	1400	1300	1900	2970	5960	5760	8100	6740	2220	3180	2670
28	1580	1200	1300	2000	2970	5880	6010	8440	6560	2040	3210	2910
29	1620	1000	1400	2000	2820	5840	6050	8560	6260	1980	3190	3110
30	1680	1000	1500	2100	---	5840	6010	8620	5800	1970	3090	3300
31	1660	---	1600	2200	---	5880	---	8680	---	1930	3110	---
TOTAL	64350	46570	49150	52000	64070	129820	170150	214500	254790	108420	74330	84260
MEAN	2076	1552	1585	1677	2209	4188	5672	6919	8493	3497	2398	2809
MAX	3260	1770	2100	2200	2970	5960	6050	8680	9650	5880	3210	3570
MIN	1580	1000	1000	1000	1840	2660	4710	5640	5800	1930	1690	2090
AC-FT	127600	92370	97490	103100	127100	257500	337500	425500	505400	215100	147400	167100

CAL YR 1983 TOTAL 1214514 MEAN 3327 MAX 8300 MIN 929 AC-FT 2409000
WTR YR 1984 TOTAL 1312410 MEAN 3586 MAX 9650 MIN 1000 AC-FT 2603000

06690000 LAKE MCCONAUGHY NEAR KEYSTONE, NE

LOCATION.--Lat 41°12'45", long 101°40'03", in NW1/4SW1/4 sec.3, T.14 N., R.38 W., Keith County, Hydrologic Unit 10180014, near right bank at outlet tower of Kingsley Dam on North Platte River, 4.5 mi west of Keystone.

DRAINAGE AREA.--29,300 mi^2, approximately, of which about 25,800 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--February 1941 to current year.

GAGE.--Electric tape gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam; storage began Feb. 9, 1941. Capacity, 1,948,000 acre-ft between elevations 3,130.0 ft, sill of outlet gates, and 3,270.0 ft, top of morning-glory spillway gates. Elevation of crest of morning-glory spillway is 3,254.0 ft. Dead storage negligible. Figures given herein represent total contents. Water is used for power development and irrigation in South-Central Nebraska by the Central Nebraska Public Power and Irrigation District.

COOPERATION.--Records of elevations and capacity table furnished by the Central Nebraska Public Power and Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,920,000 acre-ft July 12-16, 1971, elevation, 3,269.1 ft; minimum observed since operation of reservoir began, 32,860 acre-ft Sept. 29, 1941, elevation, 3,153.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 1,808,000 acre-ft July 11-13, elevation, 3,265.5 ft; minimum observed, 1,565,000 acre-ft Mar. 22-24, elevation, 3,257.2 ft.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	3,257.6	1,576,000	-
Oct. 31	3,262.0	1,702,000	+126,000
Nov. 30	3,264.3	1,771,000	+69,000
Dec. 31	3,262.0	1,702,000	-69,000
CAL YR 1983	-	-	+132,000
Jan. 31	3,261.0	1,673,000	-29,000
Feb. 29	3,258.7	1,607,000	-66,000
Mar. 31	3,257.4	1,570,000	-37,000
Apr. 30	3,258.2	1,593,000	+23,000
May 31	3,261.0	1,673,000	+80,000
June 30	3,264.5	1,777,000	+104,000
July 31	3,263.9	1,759,000	-18,000
Aug. 31	3,261.4	1,685,000	-74,000
Sept. 30	3,260.9	1,670,000	-15,000
WTR YR 1984	-	-	+94,000

06690500 NORTH PLATTE RIVER NEAR KEYSTONE, NE

LOCATION.--Lat 41°12'30", long 101°37'50", in SW1/4 sec.1, T.14 N., R.38 W., Keith County, Hydrologic Unit 10180014, on right bank 0.2 mi downstream from diversion dam of Sutherland Reservoir supply canal and 2.5 mi southwest of Keystone.

DRAINAGE AREA.--29,300 mi^2, approximately, of which about 25,800 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--June to August 1917, July to September 1939, May to September 1940, January to April 1941, March 1942 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1942, 1946-47. WSP 1630: 1958. WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,105.59 ft National Geodetic Vertical Datum of 1929 (Nebraska Public Power District bench mark). See WSP 1918 for history of changes prior to May 1, 1964.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Flow completely regulated by Lake McConaughy (station 06690000) since Feb. 9, 1941. Supply canal for Nebraska Public Power District diverts 0.2 mi upstream from station.

AVERAGE DISCHARGE.--42 years (water years 1943-84), 527 ft^3/s, 381,800 acre-ft/yr; median of yearly mean discharges, 360 ft^3/s, 260,800 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft^3/s June 30, 1917, from graph based on daily gage readings; no flow for many days in 1975-84.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,390 ft /s May 25, gage height, 6.42 ft; no flow June 19, Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	400	44	1190	1260	837	2490	4910	4440	5530	3190	1350	2600
2	72	43	1200	1180	559	2470	5080	4360	5410	2880	1290	2500
3	72	47	1210	1180	657	2450	5300	4360	5270	2860	1290	2580
4	70	45	1230	1100	785	2450	5300	4290	4950	2600	1380	2560
5	72	45	1290	1060	785	2540	5270	4140	5360	2080	1350	2500
6	68	45	1210	1060	970	2780	5240	4140	5360	1390	1270	2540
7	60	42	993	1050	1150	3060	5360	4140	5390	1330	1150	2580
8	55	43	1200	1050	1490	2920	5410	3990	5390	1320	1050	2560
9	52	45	1250	1060	1670	3040	5270	3970	5390	1870	1220	2500
10	52	44	1430	1060	1740	3170	5300	4190	5410	2040	1320	1830
11	52	44	1560	1060	1680	3240	5410	4520	5470	1760	1110	759
12	47	45	1550	1250	1680	3320	5500	4650	5390	1680	1150	388
13	47	41	1710	1350	1680	3320	5440	4650	5390	2140	1160	364
14	45	36	1790	1310	1650	3240	5470	4650	5390	2140	1450	326
15	44	30	1760	1290	1650	3170	5410	4670	5410	2000	1420	353
16	42	30	1760	1310	1750	2960	5110	4700	3910	2090	1420	364
17	42	31	1740	1310	1970	3040	4590	4970	2980	1590	1550	495
18	40	32	1740	1310	2250	2980	4360	5330	1830	1270	1710	486
19	43	33	1330	1310	2180	2880	4210	5050	5.0	1490	1740	478
20	42	33	903	1290	2110	2760	4260	4060	.00	1740	1910	516
21	39	33	900	1290	2340	2840	4540	3050	1480	1740	2050	478
22	39	20	940	1250	2390	2920	4620	3340	5000	1740	2090	478
23	39	6.7	1000	1230	2370	3110	5000	4340	5100	1700	2040	478
24	39	744	1100	1180	2410	3260	5200	4890	5100	1820	2210	249
25	38	994	1300	1130	2360	3500	5200	4960	4730	1660	2230	70
26	38	1110	1330	1200	2340	3870	5270	4860	4470	1290	2580	50
27	38	1230	1360	1200	2360	4040	4980	4780	4060	1270	2260	43
28	38	1250	1350	1150	2390	4500	4310	4860	3360	1350	2390	16
29	39	1280	1330	1130	2390	4600	4310	3490	3170	1470	2260	.00
30	40	1250	1360	1100	---	4940	4360	1210	3210	1380	2320	.00
31	43	---	1330	1040	---	4970	---	3860	---	1400	2320	---
TOTAL	1847	8715.7	41346	36750	50593	100830	149990	132910	128915.00	56260	52040	31141.00
MEAN	59.6	291	1334	1185	1745	3253	5000	4287	4297	1815	1679	1038
MAX	400	1280	1790	1350	2410	4970	5500	5330	5530	3190	2580	2600
MIN	38	6.7	900	1040	559	2450	4210	1210	.00	1270	1050	.00
AC-FT	3660	17290	82010	72890	100400	200000	297500	263600	255700	111600	103200	61770

CAL YR 1983 TOTAL 766293.70 MEAN 2099 MAX 6900 MIN .00 AC-FT 1520000
WTR YR 1984 TOTAL 791357.70 MEAN 2162 MAX 5530 MIN .00 AC-FT 1570000

06691000 NORTH PLATTE RIVER NEAR SUTHERLAND, NE

LOCATION.--Lat 41°12'37", long 101°06'53", in sec.4, T.14 N., R.33 W., Lincoln County, Hydrologic Unit 10180014, on left bank 80 ft downstream from bridge on county road, 2.5 mi upstream from Birdwood Creek, and 3.5 mi north of Sutherland.

DRAINAGE AREA.--29,800 mi², approximately, of which about 26,120 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--June to October 1917, July 1931 to August 1933 (irrigation seasons only), May to September 1935, May 1936 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 976: 1942. WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,920 ft, from topographic map. Prior to Apr. 29, 1936, nonrecording gage near present site at different datums. Apr. 29, 1936, to Oct. 6, 1971, water-stage recorder at site 80 ft upstream at present datum.

REMARKS.--Records good except those above 1,000 ft³/s and those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--42 years (water years 1943-84), 531 ft³/s, 384,700 acre-ft/yr; median of yearly mean discharges, 360 ft³/s, 260,800 acre-ft/yr. Figures unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s June 29, 1917, from discharge graph based on daily gage readings, from rating curve extended above 16,000 ft³/s; no flow July 24-28, 30, 31, 1931, Aug. 7, 1934, July 20-28, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,720 ft³/s Apr. 2, gage height, 4.89 ft; minimun daily discharge, 50 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1890	300	1030	1450	1750	2660	5440	4500	4030	2770	1350	1970
2	745	340	1010	1400	1500	2740	5560	4620	5110	2660	1180	2190
3	533	320	1040	1400	860	2710	5580	4580	5060	2360	1100	2140
4	420	300	1080	1400	930	2700	5550	4520	4990	2240	1130	2190
5	400	280	1170	1400	1020	2640	5580	4480	4680	2060	1160	2230
6	380	260	1260	1350	1010	2740	5510	4480	4840	1390	1100	2210
7	375	240	1190	1350	1320	3050	5520	4460	4790	1060	1200	2260
8	350	230	1040	1350	1470	3270	5460	4500	4830	956	947	2330
9	325	220	1270	1350	1870	3240	5450	4460	5080	912	879	2330
10	300	210	1320	1350	2020	3390	5380	4400	5000	1650	1000	2270
11	275	200	1530	1400	2130	3580	5390	4660	5000	1660	961	1570
12	250	190	1660	1400	2100	3600	5410	4820	5140	1380	836	820
13	245	180	1710	1450	2110	3750	5400	4860	4910	1240	787	554
14	245	170	1870	1450	2140	3780	5340	4820	4820	1520	837	468
15	240	170	1900	1450	2110	3680	5390	4740	4780	1420	977	393
16	240	170	2000	1450	2050	3580	5370	4720	5060	1380	983	359
17	230	180	2000	1450	2140	3450	5170	4700	3350	1460	971	348
18	230	180	1900	1400	2370	3470	5200	4900	2800	999	1120	399
19	220	180	1800	1300	2500	3390	5200	5150	1220	869	1270	375
20	220	180	1500	1400	2420	3250	5150	4860	294	1010	1290	371
21	210	190	1200	1400	2390	3090	5340	3650	145	1130	1520	372
22	210	190	1100	1400	2640	3160	5200	2740	1510	1140	1530	354
23	200	190	1100	1350	2640	3280	5020	3270	4420	1150	1590	356
24	200	190	1100	1350	2600	3410	5240	4070	4720	1130	1540	478
25	190	250	1250	1350	2640	3580	5420	4810	4730	1240	1720	403
26	190	568	1350	1350	2610	3890	5370	5170	4410	1130	1730	284
27	200	760	1500	1350	2580	4380	5370	5240	4060	941	1990	180
28	220	965	1450	1450	2540	4650	5000	4990	3620	956	1730	120
29	240	1090	1450	1600	2570	5040	4600	4980	2910	997	1910	80
30	260	1040	1450	1750	---	5190	4540	3640	2710	1110	1780	50
31	280	---	1450	1750	---	5440	---	1100	---	1070	1890	---
TOTAL	10513	9933	43680	44050	59030	109780	159150	136890	119019	42990	40008	30454
MEAN	339	331	1409	1421	2036	3541	5305	4416	3967	1387	1291	1015
MAX	1890	1090	2000	1750	2640	5440	5580	5240	5140	2770	1990	2330
MIN	190	170	1010	1300	860	2640	4540	1100	145	869	787	50
AC-FT	20850	19700	86640	87370	117100	217700	315700	271500	236100	85270	79360	60410

CAL YR 1983 TOTAL 758205 MEAN 2077 MAX 6370 MIN 91 AC-FT 1504000
WTR YR 1984 TOTAL 805497 MEAN 2201 MAX 5580 MIN 50 AC-FT 1598000

06692000 BIRDWOOD CREEK NEAR HERSHEY, NE

LOCATION.--Lat 41°13'20", long 101°04'12", in NE1/4NW1/4 sec.2, T.14 N., R.33 W., Lincoln County, Hydrologic Unit 10180014, on left bank 60 ft downstream from bridge on county road, 1 mi upstream from mouth, and 5 mi northwest of Hershey.

DRAINAGE AREA.--940 mi², approximately, of which about 80 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--May 1931 to current year.

REVISED RECORDS.--WSP 1390: 1948(M), 1949, 1951-52(M). WDR NE-67, WDR NE 76-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,920 ft, from topographic map. Jan. 1, 1931, to Dec. 16, 1934, nonrecording gage and Dec. 17, 1934 to Nov. 4, 1953, water-stage recorder, at site 50 ft upstream at present datum.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--53 years, 152 ft³/s, 110,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,770 ft³/s Apr. 1, 1949, gage height, 4.35 ft, from rating curve extended above 680 ft³/s; maximum gage height, 5.12 ft Dec. 15, 1940, backwater from ice; minimum daily discharge, 61 ft³/s Jan. 19, 1935, Apr. 7, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 234 ft³/s June 16, gage height, 2.35 ft; maximum gage height, 4.57 ft Nov. 30, backwater from ice; minimum daily discharge, 90 ft³/s Nov. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	159	120	150	164	158	155	170	159	114	167	111
2	147	157	120	160	161	160	164	176	149	117	149	110
3	158	160	130	170	159	155	156	176	150	115	138	107
4	156	157	130	170	156	147	152	174	166	116	130	103
5	149	156	140	170	153	146	169	179	149	134	129	101
6	147	156	145	155	158	152	169	179	147	122	127	101
7	146	157	145	137	162	152	178	174	146	114	149	108
8	144	156	150	142	160	148	161	170	144	112	131	111
9	144	146	158	138	159	151	153	169	173	110	127	112
10	147	141	166	148	155	148	155	170	165	137	124	112
11	144	145	164	163	157	153	160	174	170	138	124	112
12	137	152	166	159	146	152	153	179	177	118	122	112
13	132	152	157	155	153	159	146	167	172	114	119	111
14	136	150	158	152	157	155	140	160	171	113	113	109
15	136	158	155	150	157	155	142	160	172	116	120	115
16	138	163	155	145	154	149	144	157	192	130	116	119
17	140	158	155	140	151	154	149	157	152	131	113	123
18	146	163	150	135	147	154	152	157	138	119	111	125
19	155	162	145	130	130	153	150	159	134	118	110	125
20	149	153	130	130	150	156	179	154	132	117	110	120
21	151	147	120	140	153	151	184	154	131	118	123	114
22	151	144	110	150	157	156	164	154	126	116	115	121
23	159	138	110	155	155	154	167	144	127	115	112	129
24	154	136	120	160	154	154	165	147	122	115	110	136
25	148	143	120	161	156	157	164	152	122	117	112	128
26	150	141	130	167	154	165	169	149	122	117	114	134
27	155	100	130	169	149	161	167	162	120	114	114	136
28	158	90	140	174	145	149	152	149	127	112	107	134
29	146	100	140	179	151	149	170	152	116	110	106	131
30	152	110	150	160	---	155	172	152	113	111	106	130
31	159	---	150	163	---	158	---	155	---	120	106	---
TOTAL	4579	4350	4359	4777	4463	4766	4801	5031	4384	3670	3754	3538
MEAN	148	145	141	154	154	154	160	162	146	118	121	118
MAX	159	163	166	179	164	165	184	179	192	138	167	136
MIN	132	90	110	130	130	146	140	144	113	110	106	101
AC-FT	9080	8630	8650	9480	8850	9450	9520	9980	8700	7280	7450	7020

CAL YR 1983	TOTAL	52860	MEAN	145	MAX	212	MIN	90	AC-FT	104800
WTR YR 1984	TOTAL	52472	MEAN	143	MAX	192	MIN	90	AC-FT	104100

06693000 NORTH PLATTE RIVER AT NORTH PLATTE, NE

LOCATION.--Lat 41°09'13", long 100°45'16", in sec.28, T.14 N., R.30 W., Lincoln County, Hydrologic Unit 10180014, on right bank 150 ft downstream from bridge on U.S. Highway 83, 0.5 mi north of city of North Platte, and 4.5 mi upstream from confluence with South Platte River.

DRAINAGE AREA.--30,900 mi^2, approximately, of which about 26,300 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--February 1895 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area. WSP 2118: 1915(M).

GAGE.--Water-stage recorder. Datum of gage is 2,792.14 ft National Geodetic Vertical Datum of 1929 (Nebraska Department of Roads bench mark). See WSP 2118 for history of changes prior to June 3, 1968.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--42 years (water years 1943-84), 770 ft^3/s, 557,900 acre-ft/yr; median of yearly mean discharges, 595 ft^3/s, 431,100 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 29,600 ft^3/s June 11, 1909, discharge measurement; minimuim daily, 20 ft^3/s Sept. 20, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,220 ft^3/s Apr. 22, gage height, 6.33 ft; maximum gage height, 6.75 ft Dec. 19, backwater from ice; minimum daily discharge, 387 ft^3/s Nov. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4660	432	1600	1700	1850	2760	5330	5080	2260	3130	1510	2170
2	1740	440	1500	1700	1900	2810	5500	5080	4770	3150	1670	2320
3	1100	458	1500	1600	1800	2780	5720	5200	5230	2830	1500	2530
4	865	447	1500	1600	1710	2730	5690	4900	5240	2660	1450	2480
5	731	427	1600	1600	1770	2680	5800	4920	5210	[illegible]	1540	2490
6	677	412	1600	1600	1800	2740	5800	4920	5060	2220	1470	2480
7	641	422	1600	1600	1850	2860	5790	4790	5220	1470	1630	2410
8	618	417	1700	1600	1780	3090	5630	4560	5360	1290	1460	2470
9	594	432	1800	1600	1970	3230	5530	4520	5540	1250	1270	2540
10	583	427	1850	1600	2230	3260	5450	4460	5630	1510	1220	2530
11	589	422	1920	1650	2330	3440	5350	4500	5540	2090	1300	2220
12	566	417	2080	1650	2300	3480	5390	4770	5830	1810	1110	1450
13	549	412	2100	1700	2300	3550	5330	4940	5810	1610	1040	938
14	538	407	2160	1800	2320	3750	5260	4890	5530	1660	1010	826
15	501	397	2370	1700	2320	3740	5210	4910	5470	1780	1130	750
16	478	389	2380	1700	2230	3620	5200	4950	5740	1650	1160	707
17	468	387	2440	1500	2210	3490	5200	4980	5540	1670	1170	681
18	452	389	2200	1700	2320	3500	5010	5000	3680	1490	1250	695
19	455	399	2000	1300	2590	3440	4630	5310	3040	1170	1470	715
20	457	405	2000	1500	2600	3440	4900	5510	1230	1150	1620	680
21	450	399	1700	1600	2550	3280	5780	5060	856	1290	1740	668
22	438	409	1400	1600	2740	3170	5970	3700	910	1300	1880	673
23	433	407	1300	1600	2960	3240	5540	3220	3050	1280	1860	667
24	429	392	1400	1550	2890	3370	5310	4000	4740	1280	1870	682
25	417	545	1600	1550	2950	3540	5540	4590	4980	1320	1930	723
26	411	955	1700	1550	2910	3720	5600	4930	4970	1370	2000	595
27	412	1300	1800	1550	2810	3940	5570	5390	4580	1200	2030	517
28	413	1400	1800	1600	2720	4380	5540	5280	4430	1110	2040	470
29	400	1500	1800	1600	2790	4550	5250	5210	3760	1160	1940	444
30	426	1600	1700	1650	---	4860	5200	4950	3150	1220	2020	418
31	419	---	1700	1700	---	5090	---	2850	---	1240	2000	---
TOTAL	21910	17245	55800	49950	67500	107530	163020	147370	132356	51830	48290	39939
MEAN	707	575	1800	1611	2328	3469	5434	4754	4412	1672	1558	1331
MAX	4660	1600	2440	1800	2960	5090	5970	5510	5830	3150	2040	2540
MIN	400	387	1300	1300	1710	2680	4630	2850	856	1110	1010	418
AC-FT	43460	34210	110700	99080	133900	213300	323400	292300	262500	102800	95780	79220

CAL YR 1983 TOTAL 873913 MEAN 2394 MAX 7550 MIN 240 AC-FT 1733000
WTR YR 1984 TOTAL 902740 MEAN 2467 MAX 5970 MIN 387 AC-FT 1791000

PLATTE RIVER BASIN

06762500 LODGEPOLE CREEK AT BUSHNELL, NE

LOCATION.--Lat 41°13'50", long 103°53'28", in sec.32, T.15 N., R.57 W., Kimball County, Hydrologic Unit 10190016, on right bank 0.1 mi south of Bushnell at south end of highway bridge on State Highway 53c.

DRAINAGE AREA.--1,350 mi².

PERIOD OF RECORD.--October 1931 to current year. Records for March to September 1931 at site 1.5 mi upstream not equivalent owing to diversions. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1933, 1935, 1937-38, 1941, 1948-49. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,845.31 ft National Geodetic Vertical Datum of 1929. Prior to Mar. 26, 1938, nonrecording gage, Mar. 26, 1938 to July 2, 1981 water stage recorder, July 3, 1981 to Sept. 30, 1981 a nonrecording gage at previous site 1.7 mi downstream from present site at datum 33.01 ft lower.

REMARKS.--Records fair. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas. Diversions for irrigation of about 12,600 acres above station.

AVERAGE DISCHARGE.--53 years, 10.9 ft³/s, 7,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s Sept. 15, 1950, gage height, 9.98 ft, from rating curve extended above 2,700 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 10.06 ft July 2, 1981, from highwater mark, site and datum then in use; minimum daily discharge, 0.09 ft³/s July 20, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 135 ft³/s Feb. 12, gage height, 1.99 ft; minimum daily, 3.9 ft³/s Aug. 29-Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	9.9	7.9	8.0	12	17	15	27	20	7.4	7.9	3.9
2	7.4	10	7.5	9.0	13	16	12	26	19	7.2	7.3	3.9
3	7.7	9.7	7.0	8.4	12	17	15	30	18	6.7	6.4	3.9
4	7.8	9.8	7.5	9.0	13	15	13	30	18	6.5	6.3	4.0
5	8.0	9.8	7.7	9.0	13	13	27	26	19	6.2	5.8	4.0
6	8.0	9.8	7.0	8.7	13	13	24	23	19	5.9	5.6	4.1
7	8.0	9.8	7.7	9.0	13	14	21	20	20	5.7	5.5	4.1
8	8.0	9.8	7.2	9.0	14	14	19	19	19	5.5	5.4	4.3
9	8.1	9.7	7.0	9.0	13	16	18	18	18	5.2	5.7	4.3
10	8.2	9.6	7.0	8.7	13	14	17	16	15	5.1	5.4	4.2
11	8.4	9.9	7.0	8.7	17	16	15	15	16	4.9	5.2	4.4
12	8.4	10	7.0	8.4	60	14	14	14	17	4.8	4.9	5.1
13	8.3	10	7.2	8.7	15	14	13	13	17	4.3	4.8	5.5
14	8.5	9.8	7.0	8.0	23	14	12	13	18	4.0	4.5	5.6
15	8.8	9.5	6.5	7.0	20	14	12	13	17	4.0	4.7	5.7
16	8.7	10	6.5	7.0	15	14	11	13	17	7.0	4.6	5.9
17	8.8	11	6.5	7.0	16	14	11	21	18	6.5	5.2	6.1
18	9.8	11	6.5	10	18	15	12	33	18	5.8	5.3	6.0
19	9.8	11	6.5	11	15	15	15	40	18	5.4	5.7	6.0
20	9.6	10	6.5	11	14	15	20	44	19	4.5	7.6	6.2
21	9.5	11	6.5	11	16	14	22	43	18	4.3	6.3	6.0
22	9.6	9.3	6.5	15	17	14	23	44	13	4.3	6.0	6.0
23	9.7	9.3	6.0	8.9	17	16	24	43	13	4.0	5.7	6.2
24	9.8	9.0	6.0	12	15	17	22	36	13	4.0	5.5	6.6
25	9.8	9.0	5.8	12	17	16	20	33	12	4.7	5.1	6.9
26	9.7	8.6	5.6	13	17	16	20	35	10	4.8	5.0	7.4
27	10	8.0	5.6	13	15	15	17	34	9.0	6.1	4.8	7.7
28	10	9.0	6.6	13	14	14	19	30	8.7	5.8	4.0	7.9
29	10	8.7	7.0	14	14	14	24	28	8.4	5.5	3.9	7.9
30	10	8.7	7.6	13	---	14	25	27	7.9	5.5	3.9	8.1
31	10	---	7.8	12	---	15	---	24	---	6.8	3.9	---
TOTAL	275.6	290.7	211.7	311.5	484	459	532	831	473.0	168.4	167.9	167.9
MEAN	8.89	9.69	6.83	10.0	16.7	14.8	17.7	26.8	15.8	5.43	5.42	5.60
MAX	10	11	7.9	15	60	17	27	44	20	7.4	7.9	8.1
MIN	7.2	8.0	5.6	7.0	12	13	11	13	7.9	4.0	3.9	3.9
AC-FT	547	577	420	618	960	910	1060	1650	938	334	333	333

CAL YR 1983	TOTAL	5841.6	MEAN	16.0	MAX	345	MIN	3.4	AC-FT	11590
WTR YR 1984	TOTAL	4372.7	MEAN	11.9	MAX	60	MIN	3.9	AC-FT	8670

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO

LOCATION.--Lat 40°58'46", long 102°15'15", in NW1/4NE1/4 and SE1/4NE1/4 (two channels) sec.33, T.12 N., R.44 W., Sedgwick County, Hydrologic Unit 10190018, on left bank of channel 4 (left channel) 215 ft downstream from bridge, and on right bank of channel 2, 800 ft downstream from bridge on U.S. Highway 385, 0.9 mi southeast of Julesburg, 3.0 mi upstream from Colorado-Nebraska State line, and 8 mi downstream from Lodgepole Creek.

DRAINAGE AREA.--23,138 mi².

PERIOD OF RECORD.--April 1902 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Julesburg" 1903-8, 1915-16, and as "at Ovid" 1922-24.

REVISED RECORDS.--WSP 1310: 1902, 1906-7, 1948(P). WSP 1440: 1903-4. WSP 1730: Drainage area.

GAGE.--Two water-stage recorders. Datum of gages is 3,446.76 ft, National Geodetic Vertical Datum of 1929. See WSP 1710 or 1730 for history of changes prior to Oct. 1, 1956. Since Oct. 1, 1956, water-stage recorders on channels nos. 2 and 4. Channel no. 2: Oct. 1, 1956, to Sept. 22, 1965, at site 300 ft downstream at present datum. Channel no., 4: Oct. 1, 1956, to Dec. 10, 1958, at site 135 ft downstream at present datum. Since May 11, 1973, supplementary water-stage recorder on channel no. 2 at bridge 800 ft upstream at same datum.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of 1,200,000 acres above station, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--82 years, 532 ft³/s; 385,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,600 ft³/s, June 20, 1965, gage height, 10.44 ft, from floodmarks in gage well; no flow, Aug. 18-20, 1902, July 25 to Aug. 7, 1903.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, unknown, minimum daily, 84 ft³/s, Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	779	650	800	2100	1220	842	6420	3520	951	126	3150
2	1270	743	550	1000	2200	1230	957	6210	2920	799	115	3020
3	1320	762	600	1200	2200	1260	1070	6070	2500	562	102	2980
4	1340	740	700	1400	2200	1280	1090	5600	2360	400	92	2860
5	1230	725	700	1600	2200	1300	1170	5450	2560	333	84	2790
6	1040	738	750	1600	2300	1280	1220	5920	2830	252	263	2780
7	917	796	800	1600	2300	1250	1320	6070	2710	194	515	2750
8	847	814	900	1800	2300	1190	1380	5680	2780	167	635	2660
9	820	804	1000	2000	2300	1160	1380	5300	2860	148	664	2510
10	824	800	1200	2200	2200	1130	1360	5240	2820	139	653	2460
11	803	831	1400	2200	2100	1120	1340	4940	2810	130	608	2380
12	767	903	1600	2200	2000	1120	1300	5000	2780	126	569	2270
13	761	957	1800	2100	2000	1100	1440	4560	2600	121	529	2130
14	755	1000	1800	1900	2000	1100	1870	4360	2500	111	437	1840
15	758	1020	1790	1800	1900	1120	2320	4320	2440	101	338	1620
16	758	1020	1680	1800	1850	1080	2680	4400	2420	96	253	1510
17	737	1020	1600	1700	1720	1040	2820	4740	2600	100	187	1480
18	706	1020	1400	1100	1680	1020	2800	5300	2960	99	154	1420
19	595	981	1100	700	1700	1030	2700	6570	3260	227	138	1400
20	611	954	1000	800	1620	1050	2880	7100	3570	288	137	1450
21	657	936	900	800	1610	1040	2940	7800	3800	247	163	1480
22	706	930	800	800	1560	1040	3280	7600	3890	191	169	1490
23	720	939	700	900	1510	1070	3670	6900	3870	165	184	1490
24	718	954	600	1100	1430	1010	4410	6120	3830	140	509	1450
25	708	957	600	1400	1360	866	4780	5910	3430	107	1710	1400
26	715	965	600	1700	1330	841	5130	5070	2820	102	2450	1350
27	721	800	650	1800	1290	950	5630	4680	2250	95	2770	1270
28	711	750	650	1900	1250	961	5830	4520	1750	90	3080	1190
29	684	700	650	2000	1240	953	6350	5600	1200	86	3220	1160
30	698	650	700	2100	---	954	6510	4410	945	105	3290	1180
31	743	---	700	2100	---	917	---	4030	---	131	3310	---
TOTAL	25890	25988	30570	48100	53450	33682	82469	171890	83585	6803	27454	58920
MEAN	835	866	986	1552	1843	1087	2749	5545	2786	219	886	1964
MAX	1340	1020	1800	2200	2300	1300	6510	7800	3890	951	3310	3150
MIN	595	650	550	700	1240	841	842	4030	945	86	84	1160
AC-FT	51350	51550	60640	95410	106000	66810	163600	340900	165800	13490	54450	116900

CAL YR 1983 TOTAL 1097975 MEAN 3008 MAX 14300 MIN 400 AC-FT 2178000
WTR YR 1984 TOTAL 648801 MEAN 1773 MAX 7800 MIN 84 AC-FT 1287000

06764880 SOUTH PLATTE RIVER AT ROSCOE, NE

LOCATION.--Lat 41°07'33" long 101°34'35", in NW1/4SW1/4 sec.4, T.13 N., R.37 W., Keith County, Hydrologic Unit 10190018, on left bank 20 ft downstream from bridge on Highway L-51B connecting Interstate 80 and U.S. Highway 30, 0.5 mi southeast of Roscoe.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,150 ft, from topographic map.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft^3/s July 2, 1983, gage height, 9.31 ft; maximum gage height, 9.55 ft June 18, 1983; minimum daily discharge, 14 ft^3/s July 29, 1984

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,090 ft^3/s May 21, gage height, 8.08 ft; minimum daily, 14 ft^3/s July 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1430	741	560	1000	2600	1530	1040	6420	3850	1270	40	3080
2	1430	776	520	1160	2600	1560	1090	6310	3170	1190	29	2930
3	1460	797	600	1350	2600	1580	1300	6170	2450	1000	27	2860
4	1490	846	700	1400	2650	1570	1420	6100	2150	786	22	2790
5	1520	853	740	1450	2650	1580	1500	6000	2040	544	18	2730
6	1410	812	860	1650	2700	1590	1570	5950	2470	427	24	2740
7	1220	840	960	1950	2750	1590	1630	5920	2720	374	66	2660
8	1050	887	1100	2000	2800	1570	1650	5800	2810	290	102	2540
9	905	898	1300	2100	2900	1570	1650	5500	3100	204	226	2370
10	902	850	1500	2200	2900	1530	1530	5360	3060	177	299	2210
11	911	815	1600	2400	2800	1480	1450	5070	2850	142	328	2120
12	795	883	1700	2500	2650	1470	1380	4900	3050	108	336	2060
13	752	949	1800	2400	2650	1430	1380	4900	2860	90	359	1950
14	750	1050	1850	2400	2550	1380	1710	4200	2670	118	334	1900
15	741	1160	2000	2200	2400	1420	2040	4070	2590	69	263	1670
16	708	1160	1900	2000	2100	1440	2370	4050	2530	82	175	1570
17	691	1130	1900	1850	2040	1450	2510	4230	2690	87	168	1530
18	699	1100	1700	1500	1970	1420	2530	5110	3460	96	108	1540
19	741	1090	1500	1160	2070	1420	2390	6160	4070	96	40	1500
20	776	1010	1300	940	2060	1430	2690	7070	4710	62	54	1480
21	741	1020	1000	920	1980	1450	2970	7860	5160	93	66	1500
22	733	1070	800	940	1910	1450	3000	7580	5190	69	53	1530
23	776	1070	700	1000	1840	1450	3500	6880	4910	46	36	1530
24	741	1120	600	1050	1800	1440	4500	5940	4690	60	48	1500
25	718	1150	640	1160	1740	1260	5000	5250	4280	56	182	1490
26	737	1030	640	1400	1730	1060	5240	4970	3760	25	1350	1450
27	726	1000	640	1450	1620	1000	5440	4580	3170	24	2180	1360
28	699	900	640	1900	1540	1060	5840	4090	2510	36	2570	1240
29	659	800	660	2250	1530	1070	6190	4420	2010	14	2950	1140
30	667	600	700	2300	---	1060	6490	4810	1530	25	3130	1080
31	708	---	800	2500	---	1070	---	4360	---	28	3120	---
TOTAL	28286	28407	33910	52480	66130	43380	83000	170030	96510	7688	18703	58050
MEAN	912	947	1094	1693	2280	1399	2767	5485	3217	248	603	1935
MAX	1520	1160	2000	2500	2900	1590	6490	7860	5190	1270	3130	3080
MIN	659	600	520	920	1530	1000	1040	4050	1530	14	18	1080
AC-FT	56110	56350	67260	104100	131200	86040	164600	337300	191400	15250	37100	115100

CAL YR 1983	TOTAL	1128310	MEAN	3091	MAX	13900	MIN	520	AC-FT 2238000
WTR YR 1984	TOTAL	686574	MEAN	1876	MAX	7860	MIN	14	AC-FT 1362000

06765500 SOUTH PLATTE RIVER AT NORTH PLATTE, NE

LOCATION.--Lat 41°07'08", long 100°45'45", in NE1/4NW1/4 sec.9, T.13 N., R.30 W., Lincoln County, Hydrologic Unit 10190018, on left bank 50 ft downstream from bridge on U.S. Highway 83, 0.5 mi north of intersection of U.S. Highway 83 and Interstate 80 south of North Platte, and 4.5 mi upstream from confleunce with North Platte River.

DRAINAGE AREA.--24,300 mi², approximately.

PERIOD OF RECORD.--June to November 1897, June to August 1914, May to September 1915, and May 1917 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1932-33, 1935.

GAGE.--Water-stage recorder. Datum of gage is 2,787.73 ft National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Dec. 11, 1956. Dec. 11, 1956, to Mar. 29, 1973, at site 50 ft upstream at same datum. Mar. 30, 1973, to Aug. 12, 1981, at site 0.5 mi upstream at same datum.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. South Platte canal diverts around station; diversion began Nov. 13, 1946.

AVERAGE DISCHARGE.--38 years (water years 1947-84, since Sutherland Canal diversion), 435 ft³/s, 315,200 acre-ft/yr; median of yearly mean discharges, 249 ft³/s, 180,400 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 37,100 ft³/s June 3, 1935, gage height, 14.02 ft, present datum; no flow at times in summers of most years prior to 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,260 ft³/s May 22, gage height, 7.13 ft; minimum daily, 152 ft³/s Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1280	877	230	600	2300	1450	1200	5590	4100	1440	236	2780
2	1230	794	230	700	2350	1450	1260	5640	3680	1320	246	2800
3	1230	666	230	700	2300	1400	1350	5570	3160	1180	227	2820
4	1260	487	260	800	2250	1390	1530	5350	2620	1000	218	2820
5	1280	356	300	1000	2300	1340	1580	5110	2280	846	227	2740
6	1290	296	450	1100	2400	1330	1500	5110	2150	638	222	2620
7	1200	268	640	1300	2500	1290	1480	5200	2480	558	246	2500
8	1040	259	800	1400	2700	1250	1370	5240	2660	520	218	2480
9	957	255	1000	1700	2710	1220	1270	5210	2870	449	200	2460
10	926	238	1100	1900	2810	1210	1170	5050	3140	416	188	2340
11	917	229	1200	2100	2880	1200	1060	4990	3220	371	192	2150
12	914	225	1300	2200	2830	1200	998	4860	3480	330	204	2110
13	895	223	1500	2300	2360	1150	938	4780	3050	286	222	2020
14	852	268	1600	2400	2380	1100	929	4730	2780	256	188	1940
15	808	296	1650	2500	2380	1100	1110	4520	2340	246	175	1880
16	807	282	1700	2500	2310	1090	1310	4470	2950	251	172	1700
17	844	217	1700	2100	2020	1130	1540	4400	2820	241	160	1510
18	856	198	1600	1700	1940	1140	1640	4620	2970	227	152	1390
19	850	198	1400	1250	1850	1150	1660	5240	3480	213	160	1320
20	825	201	1300	800	1870	1220	1670	5880	3720	209	168	1230
21	820	194	1300	800	1810	1220	2150	6500	4100	196	175	1220
22	790	190	1200	700	1660	1250	2270	6990	4400	184	188	1280
23	827	186	900	700	1570	1340	2200	7030	4270	179	172	1320
24	865	180	700	800	1460	1340	2360	6480	4030	184	164	1290
25	870	190	600	900	1360	1300	2750	5610	3820	184	179	1220
26	893	200	600	1000	1340	1240	3210	4970	3520	184	200	1160
27	918	220	600	1200	1300	1150	3420	4730	3080	184	689	1100
28	925	180	600	1450	1280	1100	3710	4300	2660	184	1500	1070
29	911	200	560	1700	1390	1170	4550	4050	2160	222	1920	989
30	900	230	580	1900	---	1180	5290	4420	1740	213	2340	916
31	901	---	580	2200	---	1180	---	4520	---	204	2610	---
TOTAL	29881	8809	28410	44400	60610	38280	58475	161160	93730	13115	14158	55175
MEAN	964	294	916	1432	2090	1235	1949	5199	3124	423	457	1839
MAX	1290	877	1700	2500	2880	1450	5290	7030	4400	1440	2610	2820
MIN	790	180	230	600	1280	1090	929	4050	1740	179	152	916
AC-FT	59270	17470	56350	88070	120200	75930	116000	319700	185900	26010	28080	109400

CAL YR 1983	TOTAL	898506	MEAN	2462	MAX	14500	MIN	130	AC-FT 1782000
WTR YR 1984	TOTAL	606203	MEAN	1656	MAX	7030	MIN	152	AC-FT 1202000

06766000 PLATTE RIVER AT BRADY, NE

LOCATION.--Lat 41°01'10", long 100°22'16" (north channel only), on two channels in secs.11 and 23, T.12 N., R.27 W., Lincoln County, Hydrologic Unit 10200101, on downstream side of highway bridges 0.5 mi and 2.5 mi, respectively, south of Brady and 18 mi downstream from confluence of North Platte and South Platte Rivers.

DRAINAGE AREA.--56,200 mi², approximately, of which about 51,400 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--May to September 1937, May 1938 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1941(M). WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Two water-stage recorders. Datum of gage on north channel is 2,639.19 ft and on south channel, 2,640.66 ft National Geodetic Vertical Datum of 1929. No information available on gages operated by State engineer prior to Nov. 18, 1938. Nov. 18, 1938, to Sept. 30, 1942, gage on north channel at datum 1 ft higher. Nov. 18, 1938, to Oct. 1, 1983, gage on south channel at datum 1 ft higher.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Tri-County main supply canal, capacity, about 2,000 ft³/s, diverts 18 mi above station; diversion started Nov. 26, 1940. River flows in two channels for which separate records are computed; figures given herein represent combined discharge.

AVERAGE DISCHARGE.--43 years (water years 1942-84, since storage in Lake McConaughy), 762 ft³/s, 552,100 acre-ft/yr; median of yearly mean discharges, 373 ft³/s, 270,200 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,500 ft³/s June 29, 1983; no flow Aug. 22-24, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,100 ft³/s May 21; minimum daily, 250 ft³/s Nov. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5790	332	700	3270	3670	4390	5440	11800	6270	5310	1120	4430
2	2480	332	840	3370	3980	4450	5720	11700	8220	5170	1220	4690
3	1580	332	1040	3470	4180	4470	5840	11900	9440	4850	1090	4960
4	878	332	1340	3560	4180	4510	5940	11700	8920	4340	1060	4800
5	652	332	1690	3660	4280	4350	6140	11300	8450	4120	1110	4860
6	547	332	1990	3770	4380	4220	6340	11200	7890	3620	1160	4840
7	492	332	2150	3770	4470	4300	6580	11400	7960	2570	1110	4820
8	454	330	2350	3670	4580	4420	6450	11300	8220	1480	1250	4860
9	428	331	2550	3370	4680	4760	6060	11000	8520	1390	960	4880
10	424	309	2550	3070	4780	4640	5920	10600	9080	1290	834	4620
11	414	317	2650	2870	4880	4720	5770	10400	9260	2490	943	4590
12	400	327	2750	2870	5000	4810	5660	10300	10600	2470	941	4000
13	391	325	2850	2670	4670	5040	5450	10400	10700	1940	854	3010
14	382	317	2850	2370	4510	5230	5280	10500	9660	1590	787	2550
15	396	313	2850	2170	4730	5260	5330	10000	9040	1770	767	2500
16	390	308	2750	2070	4830	5100	5620	9660	9890	1620	911	2370
17	386	321	2660	1920	4360	5010	5960	9540	10200	1380	904	2150
18	386	364	2580	1710	4190	4880	6120	9630	8840	1170	923	1920
19	381	342	2390	1600	4460	4880	5790	10200	7740	750	1050	1910
20	372	338	2330	1710	4700	4310	5600	11000	5950	837	1240	1890
21	368	330	2330	1710	4520	4050	7690	11900	5080	890	1410	1860
22	359	325	2230	1820	4520	3860	9440	11700	4800	953	1470	1900
23	354	321	2230	2170	4780	3940	8560	10700	6470	963	1470	1930
24	353	313	2330	2320	4710	4070	8070	10600	8720	968	1500	1920
25	340	321	2530	2520	4570	4190	8170	10900	9380	956	1510	1770
26	340	320	2670	2860	4450	4380	9460	10600	9210	1050	1650	1770
27	340	250	2870	2860	4270	4460	9820	10700	8760	976	1790	1480
28	329	384	3070	2870	4230	4580	10100	10600	8030	814	2790	1480
29	329	560	3170	2970	4220	4830	10900	9680	7160	930	3170	1360
30	329	700	3170	3080	---	5060	11100	9540	5970	956	3690	1220
31	334	---	3270	3470	---	5270	---	8920	---	1080	3990	---
TOTAL	21398	10380	73730	85590	129780	142440	210320	331270	248430	60693	44674	91340
MEAN	690	346	2378	2761	4475	4595	7011	10690	8281	1958	1441	3045
MAX	5790	700	3270	3770	5000	5270	11100	11900	10700	5310	3990	4960
MIN	329	250	700	1600	3670	3860	5280	8920	4800	750	767	1220
AC-FT	42440	20590	146200	169800	257400	282500	417200	657100	492800	120400	88610	181200

CAL YR 1983 TOTAL 1818344 MEAN 4982 MAX 23100 MIN 247 AC-FT 3607000
WTR YR 1984 TOTAL 1450045 MEAN 3962 MAX 11900 MIN 250 AC-FT 2876000

06766500 PLATTE RIVER NEAR COZAD, NE

LOCATION (REVISED).--North Channel gage: Lat 40°50'13", long 99°59'09" in NE1/4SW1/4 sec.18, T.10 N., R.23 W., Dawson County, Hydrologic Unit 10200101, on left bank 30 ft upstream from highway bridge, 1.5 mi south of Cozad. South Channel gage: Lat 40°49'51", long 99°59'16" in SE1/4SW1/4 sec.18, T.10 N., R.23 W., Dawson County, on right bank on upstream side of highway bridge, 1.5 mi south of Cozad.

DRAINAGE AREA.--56,500 mi², approximately, of which about 51,700 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July to September 1932, May 1937 to current year (prior to April 1939, irrigation seasons only). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Two water-stage recorders. Datum of gage on south channel is 2,473.07 ft and on north channel, 2,475.72 ft National Geodetic Vertical Datum of 1929 (Nebraska Department of Roads bench mark). See WSP 2118 for history of changes prior to May 10, 1966. North channel gage: May 10, 1966, to May 10, 1976, at datum 1.00 ft higher and May 11, 1976, to June 16, 1977, at present datum, both at downstream side of highway bridge 30 ft downstream. South channel gage: May 10, 1966, to July 17, 1980, at downstream side of highway bridge at present datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. River flows in two channels for which separate records are computed; figures given herein represent combined discharge.

AVERAGE DISCHARGE.--43 years (water years 1942-84, since storage in Lake McConaughy), 674 ft³/s, 488,300 acre-ft/yr; median of yearly mean discharges, 320 ft³/s, 231,800 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s June 29, 1983; no flow at times in 1937-40.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,900 ft³/s June 12; minimum daily, 54 ft³/s Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6560	488	720	3500	4020	4340	5490	10800	6980	4430	176	2540
2	4920	481	900	3600	4000	4340	6200	11300	5880	4010	211	2890
3	2360	485	1100	3600	4080	4480	6520	11500	7390	3680	229	3130
4	1630	476	1400	3700	4070	4510	6620	11300	7860	3490	160	3250
5	1240	473	1800	3800	3760	4480	6900	10700	7260	2990	263	3260
6	956	473	2000	4000	4080	4390	7170	10400	6780	2770	295	3500
7	793	456	2200	4000	4210	4440	7540	10000	6340	2470	197	3530
8	752	444	2400	3900	4430	4470	7410	9950	6630	2220	230	3600
9	726	456	2550	3600	4810	4770	7070	9900	6910	1870	228	3650
10	683	447	2550	3400	5060	4870	6800	9660	7160	1330	54	3710
11	659	439	2700	3000	5430	4790	6770	9360	7770	756	136	3680
12	635	439	2800	2800	5210	4940	6510	9320	10800	999	296	3630
13	601	446	2900	2500	5000	5030	6320	9270	9460	616	132	2960
14	592	442	2900	2400	4690	5190	6080	9170	8320	377	97	2320
15	576	431	2700	2300	4830	5290	6020	9030	7460	255	96	2080
16	577	420	2600	2200	5150	5160	6210	8570	8140	311	137	2020
17	561	423	2600	2000	4860	5110	6540	8560	8850	245	116	1870
18	577	450	2600	1800	4560	5000	6820	8780	8590	134	85	1740
19	600	466	2500	1700	4590	5000	6800	9100	6900	193	106	1730
20	603	466	2400	1800	4820	4570	6660	9450	6340	117	172	1720
21	568	462	2400	1800	4760	4140	8370	10500	4910	170	224	1650
22	558	462	2300	1900	4590	3900	9770	10800	4500	197	245	1620
23	536	454	2300	2350	4740	3750	9660	10100	4800	154	290	1720
24	523	446	2400	2450	4960	3910	8430	9450	6670	115	252	1640
25	582	446	2600	2470	4810	3990	8070	9800	8180	74	302	1640
26	570	446	2800	2550	4710	4170	8450	9730	8730	106	366	1410
27	557	347	3000	2590	4500	4290	8910	9730	8160	149	470	1430
28	539	214	3100	2820	4330	4400	9160	9810	7260	87	684	1310
29	530	290	3300	3170	4300	4770	10100	9290	6540	101	1280	1280
30	520	430	3400	3660	---	4810	10600	8670	5380	145	1650	1240
31	500	---	3500	3880	---	5350	---	8760	---	132	2150	---
TOTAL	32584	13098	75420	89240	133360	142650	223970	302760	216950	34693	11329	71750
MEAN	1051	437	2433	2879	4599	4602	7466	9766	7232	1119	365	2392
MAX	6560	488	3500	4000	5430	5350	10600	11500	10800	4430	2150	3710
MIN	500	214	720	1700	3760	3750	5490	8560	4500	74	54	1240
AC-FT	64630	25980	149600	177000	264500	282900	444200	600500	430300	68810	22470	142300

CAL YR 1983 TOTAL 1691302 MEAN 4634 MAX 21200 MIN 214 AC-FT 3355000
WTR YR 1984 TOTAL 1347804 MEAN 3683 MAX 11500 MIN 54 AC-FT 2673000

06768000 PLATTE RIVER NEAR OVERTON, NE

LOCATION.--Lat 40°40'57", long 99°32'19", in NW1/4NE1/4 sec.12, T.8 N., R.20 W., Dawson County, Hydrologic Unit 10200101, on left bank 600 ft downstream from county highway bridge, 4 mi south of Overton and 4 mi downstream from Plum Creek.

DRAINAGE AREA.--57,700 mi^2, approximately, of which about 52,900 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to September 1914 (gage heights only), October 1914 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Elm Creek" 1914-15.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,297.83 ft National Geodetic Vertical Datum of 1929. July 1914 to October 1917, nonrecording gages at site 8 mi downstream at different datum. June 1918 to Sept. 12, 1928, nonrecording gage at site 600 ft upstream (south channel only) at datum 4.0 ft higher. Sept. 13, 1928 to Sept. 30, 1930, nonrecording gage and Oct. 1, 1930 to Sept. 30, 1968, water-stage recorder, at site 600 ft upstream (south channel only) at datum 2.0 ft higher. Oct. 1, 1968 to Feb. 3, 1976, water-stage recorder on south channel at site 600 ft upstream at datum 2.0 ft higher, and Feb. 4 to June 2, 1976 (south channel gage discontinued), at datum 1.0 ft higher. Oct. 1, 1968 to July 10, 1974, north channel gage at site 600 ft upstream at datum 2.0 ft higher and July 11, 1974 to June 1, 1976, at datum 1.0 ft higher. June 2, 1976 to Aug. 19, 1984, at present site, at datum 1.0 ft higher.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--43 years (water years 1942-84, since storage in Lake McConaughy), 1,586 ft^3/s, 1,149,000 acre-ft per year; median of yearly mean discharges, 1,190 ft^3/s, 862,000 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,600 ft^3/s June 5, 1935, gage height, 6.25 ft, datum then in use, south channel; maximum gage height, 2.44 ft, present datum, June 22, 1983; no flow at times in 1919, 1922, 1925, 1927-28, 1930-41.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,600 ft^3/s June 13, gage height, 4.96 ft; maximum gage height, 5.57 ft Jan. 18, backwater from ice; minimum daily discharge, 310 ft^3/s Aug 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8820	1080	1400	3900	5880	7040	7720	12600	9850	5930	434	2500
2	8700	1100	1300	4200	5930	6890	8400	13300	8370	4830	473	2920
3	6360	1130	2230	4500	5930	7040	9080	14300	8660	3950	503	3270
4	4580	1140	2760	5000	5890	7190	9400	14400	10000	4550	572	3650
5	3650	1080	2980	5400	5690	7200	9810	14200	9840	4010	490	4160
6	3210	1000	3150	5200	5560	6920	10100	14400	9140	3860	520	4490
7	3070	1040	3310	5000	5500	6840	10200	14500	8650	3440	527	4830
8	2960	1050	3600	4900	6250	6770	10100	13600	8380	2960	765	4890
9	2860	1060	3930	4700	6590	7400	9730	13200	8830	2420	960	5120
10	2800	1040	3860	4600	6780	7380	9490	13000	9020	2020	890	5320
11	2460	1140	3850	4300	7060	7660	9450	12500	9450	1680	591	5520
12	2330	1320	4040	4000	6840	7430	9410	12100	12700	1650	428	5730
13	2250	1350	3950	3800	6480	7540	8140	12000	14400	1900	436	5390
14	2210	1330	3820	3600	6650	7710	9080	12000	11800	1560	394	4800
15	2200	1560	4010	3600	6690	7970	9290	12100	10600	926	360	4280
16	2250	1650	3960	3600	7060	8000	9220	11800	10200	703	334	4040
17	2250	1850	3540	3500	7090	7840	8000	11300	11200	755	318	3920
18	1720	1900	3690	3100	6890	7880	9270	11800	11000	658	318	4100
19	1570	2000	3280	2900	6570	7650	9450	11900	10400	477	310	3980
20	1560	2150	3210	2800	6900	7400	9370	11900	9240	448	310	4010
21	1540	2040	2850	3200	7330	7030	11000	12500	8260	420	453	3950
22	1450	1960	2700	3700	7310	6720	12000	13300	7240	415	668	3840
23	1370	1900	2800	4200	7280	6420	12800	13500	6720	408	890	3860
24	1320	2060	2900	4300	7670	6500	12400	12700	7320	394	1100	3670
25	1080	2040	3000	4400	7750	6690	11300	12300	8820	373	1050	3590
26	1110	1960	3100	4600	7590	6840	10900	12500	9960	352	1100	3630
27	1170	1870	3100	4800	7440	7000	11100	12100	10100	367	960	3500
28	1220	1400	3200	4900	7070	7010	11200	11700	9320	398	918	3480
29	1080	960	3300	5100	7100	6950	11700	11700	8110	389	1330	3470
30	1100	1300	3500	5300	---	7140	12500	11100	7210	389	1610	3460
31	1100	---	3700	5600	---	7260	---	10000	---	415	2130	---
TOTAL	81350	44460	100020	132700	195170	223390	301610	390300	284790	53047	22142	123370
MEAN	2624	1482	3226	4281	6730	7206	10050	12590	9493	1711	714	4112
MAX	8820	2150	4040	5600	7750	8000	12800	14500	14400	5930	2130	5730
MIN	1080	960	1300	2800	5560	6420	7720	10000	6720	352	310	2500
AC-FT	161400	88190	198400	263200	387100	443100	598200	774200	564900	105200	43920	244700

CAL YR 1983 TOTAL 2218360 MEAN 6078 MAX 22300 MIN 960 AC-FT 4400000
WTR YR 1984 TOTAL 1952349 MEAN 5334 MAX 14500 MIN 310 AC-FT 3872000

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1958 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1958 to current year.
WATER TEMPERATURES: January 1958 to current year.

INSTRUMENTATION.--Temperature recorder from Apr. 5, 1967 to Aug. 2, 1976; Mar. 21, 1978 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,480 micromhos May 15, 1966 (south chan.); minimum daily, 214 micromhos July 23, 1968 (south chan.).
WATER TEMPERATURES: Maximum, 37.0°C June 13, 1959 (south chan.), July 9, 1960 (north chan.); minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,210 micromhos Oct. 28 (south chan.); minimum daily, 714 micromhos June 13 (north chan.).
WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 6 (north chan.); minimum daily, 1.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)
OCT										
06...	1100	2750	863	8.5	15.0	8.4	23	430	520	290
NOV										
10...	1230	1210	--	--	5.5	9.5	23	330	1200	310
DEC										
09...	1400	4340	995	7.9	.0	5.7	26	K67	880	330
JAN										
12...	1130	5000	980	8.0	.5	10.3	20	340	9300	330
FEB										
09...	1330	7300	1040	7.9	2.0	12.7	29	--	210	350
MAR										
14...	1400	8240	955	8.0	6.5	11.7	21	480	560	310
APR										
05...	1145	6340	840	8.0	7.5	4.2	29	970	7200	260
MAY										
10...	1445	12800	1030	8.0	17.5	6.8	33	K100	K160	310
JUN										
14...	1530	11400	790	7.9	23.5	7.5	35	K5700	1400	260
JUL										
12...	1500	1770	785	8.3	28.0	11.7	40	--	K100	250
AUG										
09...	1330	1030	850	8.3	27.0	9.8	170	280	K56	180
SEP										
05...	1745	3930	850	8.4	22.0	7.9	30	K530	380	260

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)
OCT										
06...	76	25	220	27	38	.60	.060	1.0	1.1	1.7
NOV										
10...	82	26	230	30	23	1.0	.070	1.0	1.1	2.1
DEC										
09...	89	27	270	30	33	1.1	.060	1.2	1.3	2.4
JAN										
12...	91	26	260	32	20	1.2	.200	.40	.60	1.8
FEB										
09...	92	29	300	36	90	1.7	.210	.99	1.2	2.9
MAR										
14...	81	26	260	29	37	1.4	.010	.79	.80	2.2
APR										
05...	71	21	200	21	33	.70	.080	.92	1.0	1.7
MAY										
10...	78	27	270	35	10	1.1	.020	1.1	1.1	2.2
JUN										
14...	69	22	200	23	105	.90	.030	1.5	1.5	2.4
JUL										
12...	64	23	210	23	72	.30	.010	1.5	1.5	1.8
AUG										
09...	54	10	37	13	78	1.3	.040	1.3	1.3	2.6
SEP										
05...	65	24	210	24	90	.50	<.010	--	1.3	1.8

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
OCT									
06...	.080	--	--	--	--	--	--	--	6
NOV									
10...	.090	5	<100	<1	<10	4	640	630	11
DEC									
09...	.100	--	--	--	--	--	--	--	28
JAN									
12...	.120	--	--	--	--	--	--	--	12
FEB									
09...	.230	4	<100	<1	10	8	2100	1300	830
MAR									
14...	.100	--	--	--	--	--	--	--	5
APR									
05...	.100	--	--	--	--	--	--	--	38
MAY									
10...	.220	4	<100	<1	--	12	3000	--	<3
JUN									
14...	.240	--	--	--	--	--	--	--	8
JUL									
12...	.140	--	--	--	--	--	--	--	5
AUG									
09...	.180	4	<100	<1	<10	5	2400	--	35
SEP									
05...	.240	--	--	--	--	--	--	--	6

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT									
06...	--	--	--	5	--	--	--	--	5.5
NOV									
10...	6	90	80	12	.7	2	2	30	6.5
DEC									
09...	--	--	--	9	--	--	--	--	5.4
JAN									
12...	--	--	--	9	--	--	--	--	4.7
FEB									
09...	7	220	40	180	1.1	3	<1	50	7.1
MAR									
14...	--	--	--	3	--	--	--	--	--
APR									
05...	--	--	--	14	--	--	--	--	4.8
MAY									
10...	12	180	180	4	<.1	3	<1	40	7.7
JUN									
14...	--	--	--	4	--	--	--	--	10
JUL									
12...	--	--	--	3	--	--	--	--	9.1
AUG									
09...	7	260	--	8	<.1	3	<1	30	9.2
SEP									
05...	--	--	--	5	--	--	--	--	8.1

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)
OCT 06...	1100	85	81	2	11	208	.60
NOV 10...	1230	106	80	2	11	206	.60
DEC 09...	1400	125	87	2	10	209	.60
JAN 12...	1130	123	83	2	11	212	.60
FEB 09...	1330	141	86	2	9.5	209	.60
MAR 14...	1400	98	83	2	9.6	212	.60
APR 05...	1145	62	70	2	9.7	202	.50
MAY 10...	1645	128	82	2	11	178	.70
JUN 14...	1530	84	67	2	10	179	.60
JUL 12...	1500	98	72	2	14	157	.60
AUG 09...	1330	10	19	.6	12	166	.50
SEP 05...	1745	81	77	2	9.5	180	.60

DATE	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	BORON, DISSOLVED (UG/L AS B) (01020)
OCT 06...	27	590	.81	4400	.64	.030	140
NOV 10...	27	610	.83	1990	1.0	.040	150
DEC 09...	26	670	.90	7790	1.1	.070	150
JAN 12...	26	660	.89	8870	1.2	.090	140
FEB 09...	24	710	.96	13900	1.7	.120	160
MAR 14...	22	640	.87	14200	1.3	.060	<10
APR 05...	23	540	.73	9200	.72	.070	110
MAY 10...	15	630	.85	21600	1.0	.090	140
JUN 14...	19	520	.70	15900	.80	.110	120
JUL 12...	23	520	.71	2500	.27	<.010	130
AUG 09...	26	270	.37	754	.45	--	40
SEP 05...	20	540	.73	5710	.56	.060	130

06767998 PLATTE RIVER NEAR OVERTON, NE (NORTH CHANNEL)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	837	965	963	955	865	933	829	910	831	828	885	859
2	836	945	975	986	885	904	796	887	842	832	868	851
3	826	922	875	962	896	902	795	909	840	794	868	866
4	847	946	875	936	905	911	813	918	937	772	849	870
5	906	955	864	925	947	908	829	905	849	786	854	874
6	946	956	874	885	956	911	828	872	850	804	818	871
7	945	943	876	887	954	907	790	900	843	813	819	880
8	986	938	907	1010	945	914	840	921	842	833	851	885
9	999	905	966	865	928	902	839	932	837	835	810	880
10	1010	997	968	879	904	897	833	927	835	827	837	875
11	994	905	958	879	918	868	817	910	821	843	835	871
12	1030	913	965	885	915	882	834	909	722	825	839	865
13	1010	907	935	934	935	875	822	892	714	826	815	880
14	1020	887	977	963	918	870	813	894	803	870	860	906
15	1010	905	986	953	918	865	817	892	851	860	887	930
16	1010	920	1090	966	908	850	813	873	810	850	851	946
17	1030	946	1060	1140	915	855	818	886	827	870	840	945
18	1010	969	1110	1140	903	870	822	870	820	877	865	937
19	1030	972	1110	955	903	850	838	830	861	920	890	938
20	1030	959	1160	974	908	865	825	870	901	882	856	916
21	1030	965	1150	974	916	851	799	831	900	920	858	930
22	1050	845	1160	952	918	842	813	830	882	859	859	930
23	1050	856	1150	886	902	942	840	833	902	856	859	921
24	1030	835	1130	1100	895	845	880	840	837	900	829	917
25	1040	832	1170	928	875	847	905	827	833	938	805	930
26	1040	828	1150	835	868	842	910	825	820	923	808	925
27	1050	1030	1130	835	878	836	912	811	804	852	802	906
28	1040	1030	1140	796	875	844	923	809	819	897	818	945
29	1030	937	1080	782	875	842	873	813	821	918	874	945
30	1030	915	1050	854	---	824	884	828	819	915	874	930
31	1010	---	1020	859	---	826	---	826	---	903	890	---

06767999 PLATTE RIVER NEAR OVERTON, NE (SOUTH CHANNEL)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	975	1090	1030	1070	1150	1070	1010	1020	864	868	843	828
2	955	1070	1030	1080	1150	1060	998	1010	933	877	867	830
3	887	1080	1050	1070	1130	1060	995	1020	822	833	876	887
4	920	1050	1070	1110	1140	1040	1040	1020	920	846	856	828
5	963	1030	1040	1060	1130	1060	1040	1020	920	835	866	834
6	1050	1090	1040	1090	1130	1060	1030	980	917	834	829	837
7	1050	1080	1050	1110	1150	1060	1000	1010	912	841	829	841
8	1080	1090	1070	1030	1140	1070	1010	1010	920	852	832	846
9	1090	1070	1070	1030	1130	1060	1000	1020	903	891	825	853
10	1090	1110	1070	1180	1110	1060	1010	1020	898	871	828	876
11	1010	1130	1090	1190	1110	1040	1020	1020	888	877	840	870
12	1110	1120	1100	---	1100	1040	1010	1020	770	868	843	859
13	1120	1120	1100	---	1090	1030	822	1020	822	851	821	865
14	1110	1130	1110	---	1090	1030	1010	1020	890	885	900	861
15	1130	1150	1100	---	1080	994	1020	1010	847	892	890	878
16	1150	1140	995	---	1060	1000	1020	1010	881	888	877	877
17	1150	1160	1110	---	1070	1010	831	999	880	895	857	894
18	1150	1150	---	---	1060	930	1020	991	880	1060	875	897
19	1150	1130	---	---	1070	1010	1020	942	890	944	830	906
20	1170	1110	---	---	1050	920	1000	972	912	916	859	915
21	1190	1100	---	---	1050	936	933	942	912	925	863	915
22	1160	1080	---	---	1040	1010	959	945	927	868	863	910
23	1150	1100	---	---	1030	950	1010	939	910	867	859	924
24	1190	1070	---	---	1030	1010	1030	941	900	915	785	930
25	1150	1070	---	---	1010	1010	1040	948	888	936	799	942
26	1190	1010	---	---	1010	1010	1050	920	856	932	786	940
27	1190	1000	---	1150	1030	1010	1040	930	855	877	808	939
28	1210	1010	---	1130	1020	1010	1040	931	853	898	795	950
29	1190	985	---	1130	1020	1010	987	930	829	913	803	955
30	1190	995	1180	938	---	1010	982	921	823	926	800	970
31	1080	---	1150	945	---	1000	---	851	---	914	825	---

06767998 PLATTE RIVER NEAR OVERTON, NE (NORTH CHANNEL)

TEMPERATURE, WATER (DEG C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	15.0	1.0	1.0	2.0	6.0	6.0	11.0	21.0	23.0	29.0	25.0
2	21.0	15.0	1.0	1.0	2.0	6.0	2.0	9.0	22.0	27.0	30.0	25.0
3	17.0	17.0	1.0	1.0	2.0	5.0	2.0	11.0	22.0	30.0	29.0	21.0
4	16.0	13.0	1.0	1.0	2.0	4.0	6.0	15.0	22.0	28.0	32.0	22.0
5	19.0	13.0	1.0	1.0	1.0	4.0	8.0	12.0	23.0	27.0	31.0	22.0
6	19.0	15.0	1.0	1.0	2.0	4.0	12.0	14.0	24.0	27.0	33.0	25.0
7	19.0	16.0	1.0	1.0	3.0	4.0	12.0	13.0	24.0	27.0	29.0	23.0
8	16.0	10.0	1.0	1.0	3.0	3.0	9.0	15.0	25.0	31.0	32.0	23.0
9	15.0	6.0	1.0	1.0	3.0	4.0	9.0	15.0	23.0	30.0	29.0	23.0
10	16.0	8.0	1.0	1.0	2.0	4.0	9.0	16.0	23.0	30.0	30.0	22.0
11	14.0	6.0	1.0	1.0	2.0	2.0	10.0	20.0	23.0	30.0	30.0	20.0
12	14.0	6.0	1.0	1.0	3.0	2.0	11.0	22.0	21.0	29.0	30.0	23.0
13	16.0	9.0	1.0	1.0	5.0	7.0	10.0	22.0	22.0	29.0	28.0	22.0
14	15.0	8.0	1.0	1.0	6.0	7.0	9.0	21.0	24.0	27.0	28.0	19.0
15	17.0	9.0	1.0	1.0	5.0	7.0	12.0	21.0	26.0	27.0	28.0	18.0
16	17.0	10.0	1.0	1.0	4.0	6.0	14.0	22.0	26.0	31.0	30.0	15.0
17	17.0	10.0	1.0	1.0	3.0	5.0	15.0	22.0	26.0	29.0	30.0	20.0
18	14.0	9.0	1.0	1.0	2.0	3.0	14.0	19.0	25.0	28.0	28.0	24.0
19	14.0	8.0	1.0	1.0	3.0	3.0	15.0	20.0	25.0	31.0	29.0	24.0
20	13.0	8.0	1.0	1.0	3.0	7.0	9.0	22.0	27.0	31.0	29.0	25.0
21	12.0	7.0	1.0	1.0	4.0	9.0	6.0	22.0	29.0	28.0	28.0	22.0
22	14.0	4.0	1.0	1.0	6.0	9.0	6.0	22.0	29.0	29.0	23.0	19.0
23	15.0	3.0	1.0	1.0	7.0	9.0	12.0	22.0	27.0	29.0	21.0	24.0
24	15.0	5.0	1.0	1.0	6.0	11.0	13.0	21.0	26.0	25.0	25.0	16.0
25	14.0	5.0	1.0	1.0	4.0	10.0	15.0	19.0	27.0	28.0	28.0	15.0
26	14.0	1.0	1.0	1.0	3.0	8.0	15.0	17.0	27.0	29.0	30.0	13.0
27	14.0	1.0	1.0	1.0	3.0	7.0	9.0	17.0	27.0	29.0	30.0	13.0
28	13.0	1.0	1.0	1.0	3.0	5.0	9.0	17.0	28.0	26.0	30.0	14.0
29	12.0	1.0	1.0	1.0	2.0	6.0	9.0	19.0	28.0	27.0	29.0	15.0
30	12.0	1.0	1.0	1.0	---	5.0	5.0	20.0	24.0	27.0	25.0	15.0
31	11.0	---	1.0	1.0	---	5.0	---	17.0	---	23.0	27.0	---
MEAN	15.5	8.0	1.0	1.0	3.5	5.5	9.5	18.0	25.0	28.0	28.5	20.0

WTR YR 1984 MEAN 13.5 MAX 33.0 MIN 1.0

06767999 PLATTE RIVER NEAR OVERTON, NE (SOUTH CHANNEL)

TEMPERATURE, WATER (DEG C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	14.0	1.0	1.0	2.0	5.0	5.0	10.0	20.0	23.0	30.0	24.0
2	19.0	15.0	1.0	1.0	2.0	5.0	2.0	8.0	21.0	25.0	30.0	24.0
3	17.0	15.0	1.0	1.0	2.0	4.0	2.0	11.0	21.0	28.0	29.0	22.0
4	16.0	13.0	1.0	1.0	2.0	4.0	5.0	13.0	21.0	26.0	32.0	22.0
5	19.0	13.0	1.0	1.0	1.0	4.0	10.0	11.0	21.0	26.0	30.0	22.0
6	19.0	14.0	1.0	1.0	3.0	4.0	10.0	13.0	22.0	26.0	32.0	24.0
7	18.0	15.0	1.0	1.0	3.0	4.0	9.0	12.0	22.0	26.0	29.0	23.0
8	16.0	9.0	1.0	1.0	3.0	2.0	8.0	13.0	23.0	29.0	31.0	22.0
9	15.0	6.0	1.0	1.0	3.0	3.0	7.0	14.0	22.0	28.0	28.0	23.0
10	16.0	8.0	1.0	1.0	2.0	4.0	8.0	14.0	22.0	28.0	29.0	21.0
11	14.0	6.0	1.0	1.0	2.0	2.0	9.0	19.0	22.0	28.0	29.0	20.0
12	14.0	7.0	1.0	---	3.0	2.0	10.0	19.0	20.0	29.0	30.0	23.0
13	16.0	9.0	1.0	---	3.0	6.0	9.0	19.0	21.0	29.0	28.0	21.0
14	15.0	8.0	1.0	---	5.0	6.0	8.0	19.0	23.0	27.0	29.0	19.0
15	16.0	8.0	1.0	---	3.0	6.0	11.0	19.0	24.0	25.0	28.0	18.0
16	16.0	8.0	1.0	---	3.0	5.0	12.0	20.0	24.0	31.0	30.0	17.0
17	16.0	9.0	1.0	---	3.0	4.0	14.0	20.0	24.0	28.0	30.0	20.0
18	13.0	8.0	---	---	2.0	3.0	13.0	18.0	24.0	22.0	27.0	22.0
19	14.0	7.0	---	---	3.0	2.0	13.0	20.0	24.0	31.0	28.0	21.0
20	12.0	7.0	---	---	3.0	7.0	8.0	21.0	26.0	29.0	29.0	22.0
21	12.0	6.0	---	---	3.0	8.0	6.0	21.0	27.0	28.0	28.0	20.0
22	14.0	5.0	---	---	4.0	6.0	6.0	21.0	28.0	29.0	23.0	19.0
23	16.0	4.0	---	---	5.0	7.0	11.0	20.0	27.0	29.0	21.0	21.0
24	13.0	5.0	---	---	5.0	9.0	12.0	20.0	25.0	27.0	24.0	16.0
25	14.0	5.0	---	---	4.0	7.0	14.0	19.0	25.0	28.0	28.0	15.0
26	13.0	1.0	---	---	2.0	6.0	13.0	17.0	26.0	29.0	29.0	15.0
27	14.0	1.0	---	1.0	2.0	5.0	8.0	17.0	26.0	28.0	29.0	14.0
28	12.0	1.0	---	1.0	2.0	5.0	9.0	17.0	27.0	27.0	30.0	13.0
29	12.0	1.0	---	1.0	2.0	5.0	7.0	19.0	27.0	27.0	28.0	14.0
30	12.0	1.0	1.0	1.0	---	5.0	6.0	19.0	23.0	27.0	24.0	15.0
31	11.0	---	1.0	1.0	---	5.0	---	17.0	---	24.0	26.0	---
MEAN	15.0	7.5	---	---	3.0	5.0	9.0	17.0	23.5	27.5	28.5	19.5

06770000 PLATTE RIVER NEAR ODESSA, NE

LOCATION (REVISED).--Lat 40°39'44", long 99°15'03", in NE1/4SW1/4 sec.16, T.8 N., R.17 W., Phelps County, Hydrologic Unit 10200101, on right bank 1,500 ft downstream from county bridge, 2.5 mi south of Odessa and 5 mi downstream from Elm Creek.

DRAINAGE AREA.--58,100 mi², approximately, of which about 53,300 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--March 1937 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,195.07 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1938, nonrecording gage and Oct. 7, 1938 to Sept. 30, 1942, water-stage recorder, both at datum 3.00 ft higher and Oct. 1, 1942 to July 23, 1984, water-stage recorder at datum 2.00 ft higher, all at site 1,500 ft upstream.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--43 years (water years 1942-84, since storage in Lake McConaughy), 1,501 ft³/s, 1,087,000 acre-ft per year; median of yearly mean discharges, 1,120 ft³/s, 811,000 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft³/s June 29, 1983, gage height, 5.82 ft, datum then is use; maximum gage height, 5.90 ft June 22, 1983, datum then in use; no flow for periods in each year prior to 1947 and in 1953-57, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,000 ft³/s June 13, gage height, 5.00 ft, datum then in use; minimum daily, 185 ft³/s Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8060	954	1100	4000	5500	6700	7800	12800	9780	6380	306	2060
2	7650	903	1100	4200	5700	6700	8690	12800	7850	5450	324	2350
3	6500	1080	1300	4500	5800	6780	9450	14300	7200	4930	366	2790
4	4760	1160	2000	4800	5900	6780	9670	14800	8850	5840	497	3140
5	3710	1160	3100	5200	5900	6820	9950	14000	9890	5360	438	3780
6	3050	979	3100	5400	6000	6340	9950	14000	8530	4930	398	4050
7	2690	779	3100	5600	6100	6160	9950	14000	8270	4560	411	4190
8	2530	828	3400	5400	6090	6090	10200	11600	7450	4050	425	4330
9	2390	1000	3600	5200	6420	6380	9900	11600	8010	3460	635	4380
10	2390	1000	3800	5000	6820	6540	9840	12000	8010	2750	644	4670
11	2150	1000	3800	4900	6980	6740	9070	12100	8270	2310	559	4700
12	1750	1390	3800	4800	7300	6700	8960	11600	10800	1750	274	5230
13	1730	1390	4100	4200	6940	6940	8960	11100	15000	1570	269	4910
14	1860	1390	4200	4100	7250	7100	9000	11200	14000	656	284	4080
15	2100	1390	4200	3700	7250	7750	9200	11200	11800	620	202	3920
16	1830	1520	4100	3600	7400	8370	9200	11000	10400	638	185	3840
17	1750	1600	3900	3600	7650	8370	8500	10300	10900	640	193	3810
18	1750	1730	3700	3300	8010	8110	9100	11000	11300	600	202	3940
19	1750	1990	3500	3100	7060	8370	9500	12000	11200	560	202	3810
20	1520	2210	3400	3000	7300	8110	9500	11900	9010	520	211	3730
21	1360	2210	3200	3200	7600	7650	10000	11500	7300	470	279	3580
22	1470	1990	2900	3500	7450	7400	12000	12400	5670	430	411	3460
23	1340	1810	2900	3600	7150	6940	13000	12700	5540	386	482	3480
24	1340	1990	3000	3600	7250	6540	13000	12300	5980	335	635	3380
25	1340	2150	3100	3800	7400	6540	12000	11700	8060	312	765	3330
26	1230	2150	3200	3900	7150	6740	11000	11600	9950	279	795	3380
27	1310	1800	3300	4300	7060	6940	11000	12400	10900	279	878	3260
28	1440	1750	3400	4200	6700	7100	11400	12400	9780	312	755	3330
29	1260	600	3500	5000	6700	7100	11600	12300	8160	324	899	3260
30	1080	1000	3600	5200	---	7550	11900	11900	7300	290	1250	3310
31	1000	---	3800	5400	---	7550	---	10800	---	306	1510	---
TOTAL	76090	42903	100200	133300	197830	219900	303290	377300	275160	61297	15684	111480
MEAN	2455	1430	3232	4300	6822	7094	10110	12170	9172	1977	506	3716
MAX	8060	2210	4200	5600	8010	8370	13000	14800	15000	6380	1510	5230
MIN	1000	600	1100	3000	5500	6090	7800	10300	5540	279	185	2060
AC-FT	150900	85100	198700	264400	392400	436200	601600	748400	545800	121600	31110	221100

CAL YR 1983 TOTAL 2138713 MEAN 5859 MAX 22500 MIN 600 AC-FT 4242000
WTR YR 1984 TOTAL 1914434 MEAN 5231 MAX 15000 MIN 185 AC-FT 3797000

06770200 PLATTE RIVER NEAR KEARNEY, NE

LOCATION.--Lat 40°39'32", long 99°05'08", in SE1/4SE1/4 sec.14, T.8 N., R.16 W., Kearney county, Hydrologic Unit 10200101, on right bank near downstream side of bridge on State Highway 44, 2 mi south of Kearney.

DRAINAGE AREA.--58,200 mi^2, approximately, of which about 53,400 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--January 1982 to current year.

GAGE.--Water stage recorder.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft^3/s June 29, 1983, gage height, 7.42 ft; minimum daily discharge, 61 ft^3/s July 25, Sept. 11, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,100 ft^3/s June 13, gage height, 6.64 ft; minimum daily discharge, 233 ft^3/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8120	1300	1250	4200	6400	6890	7580	11800	9590	6690	375	1950
2	7590	1250	1300	4600	5760	6840	8160	12600	8650	5820	406	2360
3	6920	1270	1350	5000	5610	6930	8810	12800	7740	5210	462	2720
4	5040	1240	1400	5800	5750	7050	8900	13000	8770	5590	546	3010
5	3800	1220	1600	5800	5710	7020	9400	13000	9450	5900	543	3240
6	3100	1140	2000	5400	5440	6840	9640	12800	8840	5200	472	3380
7	2730	1100	2400	5200	5880	6760	9680	13100	8200	4620	500	3600
8	2540	1140	3000	4900	5920	6460	9730	12600	7610	3840	489	3730
9	2380	1160	3700	4600	6240	6580	9640	11900	7910	3210	645	3820
10	2320	1090	3900	4500	6520	6730	9180	11800	8210	2430	767	3910
11	2190	1060	4300	4400	6760	6830	8990	11700	8480	1930	707	4000
12	1760	1240	4700	4300	7040	6850	8960	11400	9780	1430	425	4180
13	1600	1290	4800	4100	6850	7040	8400	11000	13800	1450	366	4220
14	1580	1350	4700	4000	6960	7250	7570	10700	14600	1570	384	3730
15	1800	1360	4600	3600	6720	7540	8420	10600	12100	1180	320	3480
16	1730	1570	4500	3400	6760	7640	8420	10800	11200	701	274	3390
17	1660	1600	4200	3400	7060	7540	8200	10400	11600	627	277	3380
18	1660	1770	4100	3500	7310	7730	7580	11100	12500	748	292	3430
19	1640	1890	3900	3500	6760	7800	8520	12100	12300	558	280	3350
20	1660	1960	3700	3600	6720	7790	8840	12000	10800	455	233	3240
21	1910	1960	3500	3600	7020	7600	10700	11400	9440	459	304	3110
22	2160	1890	3300	3500	7140	7340	11700	12100	7690	421	549	2990
23	1930	1750	3200	3500	6980	7130	12400	12500	6980	397	674	2940
24	1890	1730	3100	3700	7050	6950	12800	12300	6770	420	855	2900
25	1690	1870	3000	3900	7370	7100	11400	11400	7810	419	1100	2900
26	1400	1800	3000	4100	7310	7310	10400	11400	9410	386	966	2910
27	1370	1700	3000	4500	7090	7230	9940	11600	10500	368	980	2870
28	1430	1400	3100	4900	6870	7120	10100	11400	10000	398	736	2820
29	1380	1250	3200	5800	6730	7090	10800	11600	8650	412	723	2740
30	1280	1200	3500	6800	---	7200	11200	11500	7650	349	1160	2690
31	1280	---	4000	7000	---	7320	---	10600	---	361	1450	---
TOTAL	79540	43550	101300	139100	191740	221600	286060	365000	287030	63549	18260	96990
MEAN	2566	1452	3268	4487	6612	7148	9535	11770	9568	2050	589	3233
MAX	8120	1960	4800	7000	7370	7800	12800	13100	14600	6690	1450	4220
MIN	1280	1060	1250	3400	5440	6460	7570	10400	6770	349	233	1950
AC-FT	157800	86380	200900	275900	380300	439500	567400	724000	569300	126000	36220	192400

CAL YR 1983	TOTAL	2076650	MEAN	5689	MAX	22300	MIN	1060	AC-FT	4119000
WTR YR 1984	TOTAL	1893719	MEAN	5174	MAX	14600	MIN	233	AC-FT	3756000

06770478 PLATTE RIVER (SOUTH CHANNEL) NEAR GRAND ISLAND, NE

LOCATION.--Lat 40°48'06", long 98°22'42", in SW1/4SW1/4 sec.29, T.10 N., R.9 W., Hall County, Hydrologic Unit 10200101, on right bank near downstream side of bridge on U.S. Highway 281, 9 mi south of Grand Island.

PERIOD OF RECORD.--October 1983 to September 1984.

GAGE.--Water-stage recorder. Elevation of gage is 1,870 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for winter period, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,320 ft^3/s May 19, gage height, 7.06 ft; minimum daily, 110 ft^3/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4240	530	135	2300	4000	3630	3800	6730	6050	3930	162	662
2	4220	559	190	2400	3700	3650	4270	7060	5760	3340	162	835
3	4020	620	300	2600	3500	3780	4860	7340	4830	2780	155	1110
4	3580	600	400	2800	3400	4040	4900	7340	4500	3480	149	1390
5	2540	580	520	2900	3300	3930	4780	7260	5030	3780	162	1600
6	1880	600	680	2900	3300	3840	4900	7170	5120	3420	190	1780
7	1540	580	840	2800	3600	3670	4980	7340	4470	2670	190	1920
8	1330	569	1000	2700	3800	3480	4900	7260	4110	2280	199	2080
9	1220	652	1400	2600	4000	3320	4810	6970	3950	1910	190	2150
10	1150	631	1700	2500	4200	3380	4640	6750	4180	1620	199	2200
11	1140	579	1900	2400	4300	3380	4400	6640	4310	1380	252	2220
12	1050	539	2000	2200	4500	3400	4400	6430	5350	1270	263	2280
13	883	579	2100	2100	4430	3460	4150	6130	6020	1110	209	2350
14	764	610	2200	2050	4000	3670	3780	5810	7310	1040	168	2250
15	764	579	2200	2000	4060	3760	3610	5680	7230	1020	168	2070
16	764	569	2150	1900	4000	3890	3800	5680	6400	907	155	1910
17	652	685	2100	2000	4020	4040	3860	5840	5890	787	136	1810
18	652	776	2050	2050	4360	4060	3690	6050	5760	706	131	1810
19	707	983	2000	2100	4000	4060	3730	7640	5790	662	114	1910
20	631	1030	1950	2150	3730	4040	4290	7170	5500	596	110	1890
21	620	1100	1900	2200	3710	4270	6410	6560	4710	485	240	1860
22	652	1110	1850	2200	3890	4240	7570	6430	4200	386	155	1860
23	696	1010	1800	2250	3910	4080	7310	6320	3800	300	155	1830
24	674	846	1700	2300	3730	3910	6950	6450	3400	240	183	1800
25	620	871	1600	2400	3840	3820	6700	6560	3610	230	263	1770
26	589	858	1650	2600	4110	4060	5740	6210	4200	219	310	1770
27	520	350	1700	2800	3970	4020	5280	6370	4930	199	398	1830
28	539	360	1750	3100	3840	3800	5120	6540	5280	183	452	1800
29	579	380	1900	3500	3650	3710	5740	6450	5030	176	452	1810
30	569	390	2000	4100	---	3670	6350	6590	4310	168	441	1810
31	510	---	2150	4200	---	3820	---	6640	---	162	530	---
TOTAL	40295	20125	47815	79100	112850	117880	149720	205410	151030	41436	7043	54367
MEAN	1300	671	1542	2552	3891	3803	4991	6626	5034	1337	227	1812
MAX	4240	1110	2200	4200	4500	4270	7570	7640	7310	3930	530	2350
MIN	510	350	135	1900	3300	3320	3610	5680	3400	162	110	662
AC-FT	79930	39920	94840	156900	223800	233800	297000	407400	299600	82190	13970	107800

WTR YR 1984 TOTAL 1027071 MEAN 2806 MAX 7640 MIN 110 AC-FT 2037000

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE

LOCATION.--Lat 40°52'28", long 98°16'54", in SW1/4SW1/4 sec.31, T.11 N., R.8 W., Merrick County, Hydrologic Unit 10200101, on left bank 20 ft downstream from bridge on U.S. Highway 34, 2 mi upstream from Burlington Northern Inc. bridge, and 5 mi southeast of Grand Island.

DRAINAGE AREA.--58,800 mi^2, approximately, of which about 54,000 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WSP 956: 1935. WSP 1390: 1942. WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,831.89 ft National Geodetic Vertical Datum of 1929 (Nebraska Department of Highways bench mark). Prior to Oct. 23, 1933, nonrecording gage at bridge 68 ft downstream and Oct. 23, 1933, to Aug. 19, 1980, water-stage recorder at site 98 ft downstream, all at same datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--43 years (water years 1942-84, since storage in Lake McConaughy), 1,528 ft^3/s, 1,107,000 acre-ft per year; median of yearly mean discharges, 1,180 ft^3/s, 855,000 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft^3/s June 6, 1935, gage height, 5.99 ft, from rating curve extended above 18,000 ft^3/s; maximum gage height, 6.16 ft Mar. 27, 1960, backwater from ice; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,000 ft^3/s June 15, gage height, 5.17 ft; minimum daily, 314 ft^3/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7400	1240	1350	4500	7700	6960	7170	12400	9970	7620	446	934
2	7510	1250	1350	5000	7300	7070	8870	13200	9170	6790	448	1320
3	7290	1340	1400	5400	6600	6960	10900	13500	7970	5850	434	1790
4	6800	1310	1450	6200	6300	7920	11000	13400	7670	7510	442	2180
5	4910	1250	1500	6100	6200	7630	10500	13300	9030	8000	446	2530
6	3760	1270	2000	6000	6200	7370	10200	13300	9130	7000	479	2920
7	3180	1160	2700	5800	6600	6590	10300	14000	8270	6000	472	3310
8	2860	1150	3200	5400	6800	6390	10100	13800	7500	5000	471	3720
9	2710	1280	3200	5000	7000	6240	10000	13100	6980	4300	452	4000
10	2620	1250	3500	4700	7200	6440	9960	12100	7120	3500	445	4220
11	2530	1210	4000	4500	7300	6340	9820	11800	7330	2760	521	4410
12	2420	1210	4500	5000	7600	6640	9670	11800	9370	2370	566	4620
13	2110	1280	4700	4500	7400	6800	9040	11400	10400	1910	537	4850
14	1930	1310	5000	4000	7340	6800	8320	10600	13900	1770	475	4780
15	1960	1340	5000	3800	7060	6900	7360	10400	15000	1840	437	4330
16	2030	1300	4800	3500	6760	7000	8090	10400	12100	1640	408	4020
17	1910	1490	4500	3800	6750	7200	8000	10500	10500	1420	386	3760
18	1720	1610	4300	4000	7690	7400	7580	11200	9980	1210	349	3660
19	1830	1910	4200	4100	6970	7500	7110	14200	10600	1060	323	3660
20	1820	2080	4100	4100	6440	7600	8150	13600	10500	987	314	3540
21	1690	2230	3800	4200	6630	7780	11900	12900	9200	882	482	3450
22	1510	2300	3500	4100	7160	7650	13800	12400	7840	828	397	3350
23	1440	2170	3300	4100	7350	7280	13100	12100	6830	769	397	3290
24	1350	2000	3200	4000	7280	7020	12100	12300	5790	710	451	3130
25	1290	2070	3100	4200	7530	6790	11800	12200	6170	682	549	3050
26	1300	2200	3100	4500	8040	7300	10800	11300	7490	664	650	3010
27	1210	2100	3300	5200	7610	7380	9710	11400	9230	628	720	3080
28	1190	1700	3400	5800	6960	6970	9430	11700	10100	571	748	2990
29	1180	1400	3700	7000	7120	6780	10600	11300	9490	515	692	2900
30	1190	1300	4000	7500	---	6780	11800	11200	8320	493	624	2880
31	1150	---	4200	7600	---	7100	---	11000	---	458	702	---
TOTAL	83800	46710	105350	153600	204890	218580	297180	377800	272950	85737	15263	99684
MEAN	2703	1557	3398	4955	7065	7051	9906	12190	9098	2766	492	3323
MAX	7510	2300	5000	7600	8040	7920	13800	14200	15000	8000	748	4850
MIN	1150	1150	1350	3500	6200	6240	7110	10400	5790	458	314	934
AC-FT	166200	92650	209000	304700	406400	433600	589500	749400	541400	170100	30270	197700

CAL YR 1983 TOTAL 2065810 MEAN 5660 MAX 23500 MIN 1150 AC-FT 4098000
WTR YR 1984 TOTAL 1961544 MEAN 5359 MAX 15000 MIN 314 AC-FT 3891000

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1972 to September 1980.
WATER TEMPERATURES: July 1972 to September 1980.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,250 micromhos Feb. 3, 1980; minimum daily, 575 micromhos May 24, 1977.
WATER TEMPERATURES: Maximum, 34.5°C July 23, 1972; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)
OCT 13...	0845	2180	980	8.6	9.0	10.4	24	K400	370	310
NOV 09...	0945	1360	--	8.5	3.5	11.6	18	380	1600	300
DEC 08...	1145	3230	--	8.2	.5	12.4	23	530	540	300
JAN 05...	1040	6120	1040	8.0	.5	11.0	17	K24	270	360
FEB 28...	1030	7120	1030	8.4	.5	13.0	21	K120	12000	320
MAR 29...	1000	6810	945	8.2	3.5	12.2	25	160	230	290
APR 25...	1010	12000	886	8.3	12.5	9.8	26	300	620	300
MAY 23...	0935	12200	880	8.1	19.0	9.0	30	280	140	280
JUN 20...	0920	10600	818	8.3	24.0	8.2	44	240	290	280
JUL 18...	0845	1200	836	8.3	25.0	8.6	48	89	K56	250
AUG 16...	0850	420	851	7.9	25.0	8.4	40	65	60	230
SEP 12...	0845	4880	913	8.3	21.0	8.9	50	1200	330	300

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)
OCT 13...	103	78	28	90	2	9.6	207	250	32
NOV 09...	--	79	26	--	--	--	--	230	29
DEC 08...	--	78	26	--	--	--	--	280	30
JAN 05...	--	95	29	--	--	--	--	270	28
FEB 28...	103	83	27	85	2	9.5	216	250	30
MAR 29...	--	78	24	--	--	--	--	240	27
APR 25...	--	79	24	--	--	--	--	220	25
MAY 23...	94	74	24	75	2	9.4	190	240	27
JUN 20...	--	74	22	--	--	--	--	200	23
JUL 18...	--	56	26	--	--	--	--	230	27
AUG 16...	80	51	24	83	2	13	146	230	30
SEP 12...	--	79	26	--	--	--	--	230	28

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
OCT									
13...	.60	23	640	.86	3740	34	.40	.42	.050
NOV									
09...	--	--	--	--	--	24	.70	--	.090
DEC									
08...	--	--	--	--	--	26	.80	--	.200
JAN									
05...	--	--	--	--	--	10	.90	--	.110
FEB									
28...	.60	23	640	.87	12300	56	1.4	1.4	.070
MAR									
29...	--	--	--	--	--	37	.90	--	.010
APR									
25...	--	--	--	--	--	46	.60	--	.070
MAY									
23...	.60	18	580	.79	19200	65	.70	.70	.010
JUN									
20...	--	--	--	--	--	124	.20	--	<.010
JUL									
18...	--	--	--	--	--	94	<.10	--	.030
AUG									
16...	.50	23	540	.74	615	43	<.10	<.10	.040
SEP									
12...	--	--	--	--	--	87	.40	--	.090

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT									
13...	1.2	1.2	1.6	.090	.020	160	4	5	6.5
NOV									
09...	1.0	1.1	1.8	.110	--	--	--	--	4.0
DEC									
08...	1.3	1.5	2.3	.060	--	--	--	--	4.7
JAN									
05...	.39	.50	1.4	.060	--	--	--	--	4.9
FEB									
28...	.93	1.0	2.4	.150	.110	140	17	6	5.6
MAR									
29...	.79	.80	1.7	.090	--	--	--	--	5.8
APR									
25...	.83	.90	1.5	.140	--	--	--	--	7.7
MAY									
23...	.69	.70	1.4	.200	.100	130	15	13	8.1
JUN									
20...	--	.50	.70	.320	--	--	--	--	8.6
JUL									
18...	1.4	1.4	--	.130	--	--	--	--	9.5
AUG									
16...	1.2	1.2	--	.150	.010	140	6	32	12
SEP									
12...	2.3	2.4	2.8	.300	--	--	--	--	13

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)
NOV								
09...	0945	4	100	<1	100	6	1000	--
MAY								
23...	0935	4	100	<1	<10	8	2100	2100

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV							
09...	5	100	--	<.1	2	<1	20
MAY							
23...	2	260	250	.1	2	<1	30

06772000 WOOD RIVER NEAR ALDA, NE

LOCATION.--Lat 40°51'16", long 98°28'20", in NE1/4SE1/4 sec.7, T.10 N., R.10 W., Hall County, Hydrologic Unit 10200102, on right bank 1.2 mi south of Alda, 2.2 mi upstream from old north channel of the Platte River, and 19 mi upstream from present mouth.

DRAINAGE AREA.--628 mi².

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,897.66 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Records fair. Numerous small pump diversions for irrigation above station.

AVERAGE DISCHARGE.--31 years, 10.5 ft³/s, 7,610 acre-ft/yr; median of yearly mean discharges, 7.9 ft³/s, 5,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,630 ft³/s June 16, 1967, gage height, 12.22 ft; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
June 18	1130	441	9.54
July 8	0330	*598	a10.05

a From floodmark

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.00	.00	.00	14	.00	4.7	25	5.3	12	36	29
2	.08	.00	.00	.00	12	.00	9.7	22	9.2	9.9	37	23
3	.00	.00	.00	.00	9.4	.52	34	37	7.5	9.2	31	20
4	.00	.00	.00	.00	.70	12	21	40	7.0	95	30	17
5	.00	.00	.00	.00	.02	20	13	43	7.7	278	31	18
6	.00	.00	.00	.00	.00	7.0	10	44	4.0	429	31	15
7	.00	.00	.00	.00	.00	1.4	12	54	4.2	532	30	12
8	.00	.00	.00	.00	.00	.80	9.7	79	4.0	343	26	9.7
9	.00	.00	.00	.00	.00	.29	7.5	107	4.0	69	32	6.8
10	.00	.00	.00	.00	.00	1.0	7.2	44	18	33	33	5.1
11	.00	.00	.00	.00	.00	2.0	12	26	18	22	33	3.6
12	.00	.00	.00	.00	.00	7.0	17	16	31	18	29	4.5
13	.00	.00	.00	.00	.00	3.0	11	12	103	15	26	3.3
14	.00	.00	.00	.00	5.8	1.9	7.2	8.7	293	14	29	2.4
15	.00	.00	.00	.00	18	2.0	5.7	5.7	381	14	27	1.2
16	.00	.00	.00	.00	9.2	1.1	3.8	5.3	393	12	29	1.0
17	.00	.00	.00	.00	5.5	2.2	2.2	5.1	406	14	26	.60
18	.00	.00	.00	.00	1.8	4.2	1.0	5.5	434	16	25	.05
19	.00	.00	.00	.00	.70	2.2	.90	39	337	22	22	.00
20	.00	.00	.00	.00	.03	1.3	.60	28	166	28	23	.00
21	.00	.00	.00	.00	.00	2.4	6.7	66	123	34	92	.00
22	.00	.00	.00	.00	.00	9.4	200	114	134	33	145	.00
23	.00	.00	.00	.00	.00	6.8	196	66	93	29	71	.00
24	.00	.00	.00	.00	.00	9.2	164	35	56	29	138	.00
25	.00	.00	.00	.00	.00	6.0	100	20	53	36	62	.00
26	.00	.00	.00	.00	.00	11	57	15	91	34	29	.00
27	.00	.00	.00	.00	.00	11	39	11	66	35	17	.00
28	.00	.00	.00	.00	.00	9.4	34	7.7	56	37	26	.00
29	.00	.00	.00	3.6	.00	6.2	32	7.5	48	35	32	.00
30	.00	.00	.00	12	---	10	27	6.2	17	35	29	.00
31	.00	---	.00	14	---	8.2	---	5.1	---	33	27	---
TOTAL	.49	.00	.00	29.60	77.15	159.51	1045.90	999.8	3369.9	2355.1	1254	172.25
MEAN	.02	.00	.00	.95	2.66	5.15	34.9	32.3	112	76.0	40.5	5.74
MAX	.41	.00	.00	14	18	20	200	114	434	532	145	29
MIN	.00	.00	.00	.00	.00	.00	.60	5.1	4.0	9.2	17	.00
AC-FT	.0	.00	.00	59	153	316	2070	1980	6680	4670	2490	342

CAL YR 1983 TOTAL 1985.21 MEAN 5.44 MAX 112 MIN .00 AC-FT 3940
WTR YR 1984 TOTAL 9463.70 MEAN 25.9 MAX 532 MIN .00 AC-FT 18770

06774000 PLATTE RIVER NEAR DUNCAN, NE
(National stream-quality accounting network station)

LOCATION (REVISED).--Lat 41°22'05", long 97°29'35", in SE1/4SW1/4 sec.12, T.16 N., R.2 W., Platte County, Hydrologic Unit 10200103, on left bank 300 ft downstream from highway bridge, 1.5 mi south of Duncan, and 12 mi upstream from Loup River.

DRAINAGE AREA.--60,900 mi^2, approximately, of which about 56,100 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1895 to December 1909 (irrigation seasons only 1895-1900), July 1910 to December 1911 (gage heights and discharge measurements only), April 1912 to September 1915, June 1928 to current year. Published as "near Columbus" 1895-1915.

REVISED RECORDS.--WSP 956: 1935. WSP 1390: 1897, 1899-1901, 1903-5, 1929-32, 1935(M), 1936. WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,476.82 ft National Geodetic Vertical Datum of 1929. June 1895 to December 1909, April 1912 to September 1915, and June to October 1928, nonrecording gage at site 7 mi downstream at different datums. Oct. 25, 1928, to Feb. 20, 1935, nonrecording gage and Feb. 20, 1935 to Mar. 21, 1984 recording gage both at site 300 ft upstream at 2.00 ft higher datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--43 years (water years 1942-84, since storage in Lake McConaughy), 1,689 ft^3/s, 1,224,000 acre-ft/yr; median of yearly mean discharges, 1,330 ft^3/s, 964,000 acre-ft/yr. Figures unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 44,100 ft^3/s June 23, 1905, gage height, 6.50 ft, site and datum then in use; no flow at times in 1896, 1902, 1904-5, 1910-11, 1913-14, 1928, all at site downstream. 1931, 1933-42, 1944, 1952-57, 1959, 1963, 1974, 1976, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,100 ft^3/s May 20, gage height, 7.03 ft; maximum gage height, 7.22 ft Apr. 23, shifting control; minimum daily discharge, 397 ft^3/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8280	1410	1500	5000	8400	9070	9750	15000	12300	9290	664	676
2	8000	1380	1700	5600	8400	8260	10300	15600	11400	8170	656	802
3	8340	1680	1800	6400	8400	8290	15100	17100	10500	7140	618	1010
4	7970	1930	2000	6800	8200	10600	17000	18000	9690	6570	597	1420
5	7240	1780	2300	7200	8000	11200	16200	17500	9640	8270	577	1960
6	4840	1660	2600	7200	7800	10400	15300	17200	10700	8400	575	2520
7	3550	1610	3000	6800	8000	9200	14500	18100	10800	7840	562	2980
8	2980	1530	3400	6400	8200	8000	14200	18000	10300	6820	564	3290
9	2680	1600	3800	5800	8400	7800	13500	17300	9710	5930	544	3590
10	2680	1770	4000	5400	8600	7350	12900	16400	9270	4340	512	3790
11	2740	1820	4600	4800	8600	8090	12800	14900	9360	3230	508	4060
12	2300	1870	5000	4600	8800	8400	14800	13700	11700	2720	498	4330
13	2170	1720	5200	4600	8600	8600	13900	13200	14800	2430	498	4290
14	1880	1590	5000	4700	8600	8800	12500	12700	15100	2160	498	4570
15	1620	1650	4800	4800	8970	9000	11500	12300	16100	1990	490	4610
16	1450	1640	4700	4700	8950	9800	10100	12400	18200	2020	458	4150
17	1640	1590	4500	4600	8500	9400	10400	12900	16100	1960	426	4040
18	1790	1580	4000	4600	8470	9800	10200	14900	14200	1740	403	3970
19	2060	2000	4500	4500	9200	9600	9880	16400	12100	1450	405	3980
20	2170	2320	4400	4500	8590	9400	9350	18200	12200	1340	397	4010
21	2090	2450	4000	4500	8300	9640	12100	18200	12100	1240	540	4140
22	1930	2510	3900	4500	8630	10000	17000	17700	10900	1070	614	3920
23	1910	2520	3700	4600	9270	10300	18600	16800	10400	970	697	3870
24	1840	2330	3500	4700	9690	10100	17900	15900	9860	874	617	3660
25	1780	2120	3500	4800	9770	9920	16800	15500	7220	822	607	3500
26	1710	2020	3500	5400	10100	9980	15800	15400	7360	788	725	3560
27	1580	1890	3600	6000	10400	11600	13700	14300	8370	775	751	3690
28	1490	1800	3800	6600	9840	11500	11600	13800	9990	778	767	3770
29	1420	1700	3900	7200	9330	10900	11200	13700	10700	721	778	3870
30	1390	1600	4100	8000	---	10500	13600	13000	10400	688	782	3800
31	1390	---	4500	8400	---	9960	---	12700	---	666	719	---
TOTAL	94910	55070	114800	173700	255060	295460	402480	478800	341470	103202	18047	101828
MEAN	3062	1836	3703	5603	8795	9531	13420	15450	11380	3329	582	3394
MAX	8340	2520	5200	8400	10400	11600	18600	18200	18200	9290	782	4610
MIN	1390	1380	1500	4500	7800	7350	9350	12300	7220	666	397	676
AC-FT	188300	109200	227700	344500	505900	586000	798300	949700	677300	204700	35800	202000

CAL YR 1983 TOTAL 2286920 MEAN 6266 MAX 23800 MIN 1380 AC-FT 4536000
WTR YR 1984 TOTAL 2434827 MEAN 6653 MAX 18600 MIN 397 AC-FT 4829000

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1977 to September 1981.
WATER TEMPERATURES: November 1977 to September 1980.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,100 micromhos Feb. 12, 1981; minimum daily, 290 micromhos Mar. 21, 1978.
WATER TEMPERATURES: Maximum, 33.0°C July 10, 11, 1980; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)
NOV 15...	1600	1620	918	8.1	7.0	734	5.8	12.2	K71	240	310
JAN 12...	1230	4600	1000	7.9	.0	740	5.2	18.3	K64	120	320
MAR 21...	1300	9110	900	7.7	5.0	727	28	12.8	K220	K65	300
MAY 23...	0950	16900	860	8.1	19.0	740	40	7.7	1000	K440	260
JUL 18...	0945	1780	810	8.1	25.0	730	31	8.6	K31	1100	230
SEP 10...	1420	3820	890	7.5	21.0	726	55	9.5	200	K250	280

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)
NOV 15...	106	81	26	84	2	9.4	205	260	31	.60	23
JAN 12...	109	87	26	84	2	12	216	250	31	.50	23
MAR 21...	91	79	24	77	2	9.6	206	220	27	.50	21
MAY 23...	78	69	21	67	2	9.7	192	200	25	.50	17
JUL 18...	65	52	24	77	2	12	162	220	28	.60	19
SEP 10...	115	70	25	80	2	10	163	240	29	.70	19

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671)
NOV 15...	640	640	.87	2800	1.1	.110	1.2	.150	.090	.090
JAN 12...	680	640	.92	8450	1.0	<.010	.20	.080	.060	.040
MAR 21...	600	580	.82	14800	1.3	.040	.90	.300	.180	.050
MAY 23...	546	520	.74	24900	.98	.030	.60	.250	.130	.120
JUL 18...	531	530	.72	2550	<.10	.050	1.4	.170	.020	.020
SEP 10...	583	570	.79	6010	4.0	<.010	3.0	.340	.010	.060

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ALUMINUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
NOV 15...	1600	30	4	87	<.5	1	<1	<3	2	5	<1
MAR 21...	1300	10	3	72	.5	<1	<1	<3	4	6	<1
MAY 23...	0950	40	4	95	<1.0	<1	<1	<3	4	46	2
JUL 18...	0945	10	4	69	<1.0	<1	<1	<3	3	23	4

DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
NOV 15...	53	9	<.1	<10	1	2	<1	770	<6	10
MAR 21...	34	7	<.1	<10	<1	2	<1	720	<6	17
MAY 23...	37	5	.1	<10	1	2	<1	530	<6	13
JUL 18...	36	4	.1	10	7	1	<1	620	6	8

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	TEMPERATURE (DEG C) (00010)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 15...	1600	1620	7.0	189	827	--	--	--	--	--	74
JAN 12...	1230	4600	.0	90	1120	--	--	--	--	--	98
MAR 21...	1300	9110	5.0	589	14500	31	36	63	95	100	--
MAY 23...	0950	16900	19.0	852	38900	18	20	37	84	97	--
JUL 18...	0945	1780	25.0	212	1020	63	84	96	100	--	--
SEP 10...	1420	3820	21.0	494	5100	74	77	86	100	--	--

06775500 MIDDLE LOUP RIVER AT DUNNING, NE

LOCATION.--Lat 41°49'50", long 100°06'00", in NW1/4SE1/4 sec.33, T.22 N., R.24 W., Blaine County, Hydrologic Unit 10210001, on left bank just upstream from bridge on State Highway 2 at northeast corner of Dunning, 1 mi upstream from Dismal River.

DRAINAGE AREA.--1,850 mi^2, approximately, of which about 80 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1945 to current year.

REVISED RECORDS.--WDR NE-72: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,607.14 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 12, 1946, nonrecording gage, and Sept. 12, 1946, to Sept. 30, 1962, water-stage recorder at site 0.2 mi upstream at datum 0.03 ft higher.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--39 years, 403 ft^3/s, 292,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft^3/s Apr. 20, 1971, gage height, 2.50 ft; maximum gage height, 7.02 ft Mar. 31, 1949, backwater from ice, site and datum then in use; minimum daily discharge, 100 ft^3/s Dec. 5, 6, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 686 ft^3/s Apr. 12, gage height, 1.87 ft; maximum gage height, 5.34 ft Jan. 16, backwater from ice; minimum daily discharge, 350 ft^3/s Dec. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	426	424	380	460	441	443	504	445	466	431	419	385
2	438	437	390	440	484	467	546	415	455	443	418	388
3	443	436	400	430	491	476	521	442	438	432	428	389
4	461	435	400	480	495	496	464	511	445	461	419	386
5	431	437	420	460	492	489	485	460	446	457	412	390
6	419	435	410	480	453	490	524	462	452	449	417	394
7	411	428	410	500	441	484	576	423	469	435	426	394
8	399	446	430	520	452	460	540	421	476	429	428	401
9	412	462	420	480	466	427	559	441	460	430	425	397
10	426	428	430	460	478	446	545	458	462	464	415	393
11	436	434	440	450	500	441	569	471	455	490	411	399
12	434	444	450	430	503	473	622	465	461	452	406	400
13	423	435	480	440	474	458	555	461	457	437	403	400
14	423	435	400	450	484	461	498	457	452	439	404	402
15	432	422	400	450	519	461	473	452	446	436	410	415
16	427	423	390	460	463	500	484	452	483	431	439	416
17	427	437	370	450	475	458	476	455	492	431	416	410
18	442	448	350	420	497	479	476	459	490	424	417	403
19	447	466	390	400	450	477	474	473	450	421	412	404
20	434	441	380	390	442	481	472	459	442	432	438	399
21	427	439	400	410	461	481	570	459	446	431	434	403
22	414	448	390	420	493	488	503	463	441	420	410	410
23	423	434	390	450	505	493	468	453	442	414	405	416
24	428	441	400	440	497	478	497	439	424	414	409	431
25	420	407	400	460	478	501	503	458	422	414	409	411
26	416	390	390	500	495	529	504	446	431	429	401	404
27	420	370	390	600	482	534	503	485	422	427	397	423
28	432	370	370	514	489	510	454	449	444	416	391	410
29	427	380	390	532	452	507	497	441	429	405	389	396
30	420	380	400	470	---	507	477	441	428	400	388	404
31	429	---	440	451	---	509	---	452	---	409	385	---
TOTAL	13247	12812	12500	14297	13852	14904	15339	14068	13534	13403	12781	12073
MEAN	427	427	403	461	478	481	511	454	451	432	412	402
MAX	461	466	480	600	519	534	622	511	492	490	439	431
MIN	399	370	350	390	441	427	454	415	422	400	385	385
AC-FT	26280	25410	24790	28360	27480	29560	30420	27900	26840	26580	25350	23950

CAL YR 1983 TOTAL 165471 MEAN 453 MAX 757 MIN 350 AC-FT 328200
WTR YR 1984 TOTAL 162810 MEAN 445 MAX 622 MIN 350 AC-FT 322900

06775500 MIDDLE LOUP RIVER AT DUNNING, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-56, 1965 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1949 to September 1956, October 1965 to current year.
SUSPENDED SEDIMENT DISCHARGE: March 1950 to September 1952, October 1953 to September 1954.

INSTRUMENTATION.--Temperature recorder from Oct. 1, 1965.

EXTREMES FOR PERIOD OF RECORD.--
WATER TEMPERATURES: Maximum, 34.0°C June 21, 1956; minimum, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily, 3,800 mg/L Feb. 23, 1952; minimum daily, 56 mg/L Jan. 23, 1952.
SEDIMENT LOADS: Maximum daily, 5,160 tons Mar. 31, 1952; minimum daily, 21 tons Jan. 23, 1952.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 30.0°C Aug. 5; minimum, 0.5°C on many days during winter period.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	16.0	16.0	12.0	.5	.5	.5	.5	6.5	3.0	9.5	4.0
2	19.0	15.0	14.5	11.0	.5	.5	.5	.5	6.0	3.5	6.5	6.0
3	19.0	14.5	15.0	12.0	.5	.5	.5	.5	4.5	3.0	6.5	4.5
4	16.5	13.5	13.5	11.5	.5	.5	.5	.5	4.0	1.5	5.5	3.0
5	17.0	12.0	12.0	11.0	.5	.5	.5	.5	3.0	1.0	6.0	1.5
6	16.5	12.0	13.5	10.5	.5	.5	.5	.5	6.0	1.0	4.0	1.5
7	19.5	13.5	13.5	9.5	.5	.5	.5	.5	7.0	3.0	5.0	1.0
8	14.5	12.0	11.5	5.5	.5	.5	.5	.5	7.0	3.5	3.5	1.0
9	12.0	11.0	5.5	3.5	.5	.5	.5	.5	8.5	4.0	3.0	1.0
10	15.0	12.0	7.0	3.5	.5	.5	.5	.5	8.5	4.0	7.0	1.0
11	14.5	11.5	5.0	3.5	.5	.5	2.0	.5	6.5	2.0	5.5	1.5
12	11.5	9.0	6.5	4.0	.5	.5	2.0	.5	5.0	3.0	5.5	1.5
13	12.0	6.5	6.5	4.5	.5	.5	.5	.5	7.0	3.0	11.0	4.0
14	11.0	8.0	6.5	5.0	.5	.5	.5	.5	9.0	8.0	10.5	6.5
15	13.0	9.0	8.0	4.0	.5	.5	.5	.5	6.5	2.0	10.0	5.5
16	13.0	9.0	8.0	4.5	.5	.5	.5	.5	7.0	2.0	7.0	1.5
17	13.0	9.0	9.0	5.5	.5	.5	.5	.5	5.5	3.0	8.0	1.5
18	11.5	11.0	8.0	7.0	.5	.5	.5	.5	3.0	.5	5.5	3.0
19	11.0	10.5	7.0	5.5	.5	.5	.5	.5	3.0	.5	7.0	2.0
20	10.0	10.0	6.5	3.5	.5	.5	.5	.5	6.0	.5	10.0	4.5
21	10.0	10.0	5.5	4.0	---	---	.5	.5	9.0	2.0	11.5	4.5
22	13.5	10.0	4.0	3.0	---	---	.5	.5	8.5	4.0	10.0	6.0
23	13.5	9.5	3.5	2.0	---	---	.5	.5	8.0	3.5	11.0	5.0
24	11.5	10.0	4.0	1.5	---	---	.5	.5	8.5	3.5	14.0	5.5
25	11.5	8.0	5.5	2.0	---	---	.5	.5	6.5	4.0	11.5	8.0
26	12.0	8.0	5.0	1.0	---	---	.5	.5	6.0	2.0	10.0	8.5
27	14.0	9.0	.5	.5	---	---	3.0	.5	2.0	.5	10.0	6.5
28	12.0	9.5	.5	.5	---	---	5.5	3.0	3.5	1.0	6.5	4.5
29	10.0	8.0	.5	.5	.5	.5	5.5	2.0	6.0	1.0	6.5	4.0
30	12.0	8.5	.5	.5	.5	.5	3.5	.5	---	---	8.0	4.0
31	13.0	10.0	---	---	.5	.5	6.0	2.0	---	---	8.5	6.0
MONTH	19.5	6.5	16.0	.5	.5	.5	6.0	.5	9.0	.5	14.0	1.0

06775500 MIDDLE LOUP RIVER AT DUNNING, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	5.5	9.5	8.0	20.5	16.0	24.0	20.0	25.5	21.5	21.5	20.0
2	5.5	1.0	10.0	8.5	22.0	13.0	27.0	19.5	24.0	21.5	22.0	16.5
3	3.5	1.0	15.0	10.0	21.5	15.0	28.0	21.0	26.5	20.5	21.5	16.5
4	11.0	2.0	16.5	11.5	23.0	17.0	26.5	20.0	29.5	21.0	20.5	16.5
5	13.5	5.5	13.5	11.0	25.0	18.0	28.0	20.0	30.0	23.5	19.0	15.5
6	13.0	7.0	14.0	10.5	24.5	18.0	24.5	20.0	29.5	22.0	21.0	16.5
7	10.5	8.5	13.0	8.0	23.5	19.0	25.5	18.5	29.0	23.0	20.5	16.5
8	8.5	7.0	15.0	8.5	24.0	15.5	29.0	21.0	28.5	23.0	18.0	14.0
9	8.5	7.0	15.5	9.5	21.0	17.0	29.0	22.0	28.0	22.0	19.5	15.0
10	10.0	7.0	20.5	12.0	22.0	14.0	26.0	21.5	27.0	21.0	18.5	15.5
11	11.5	9.0	21.0	14.5	19.0	16.5	28.0	19.0	26.5	21.5	16.5	15.0
12	9.5	6.5	21.0	17.0	24.5	17.0	26.5	20.0	27.0	21.5	20.0	14.5
13	8.0	5.0	21.5	15.5	23.0	19.0	25.5	20.0	25.0	21.5	20.0	16.0
14	10.0	5.5	20.0	14.5	25.5	20.0	25.5	21.0	26.5	20.5	16.0	13.5
15	13.0	6.0	21.5	14.5	27.0	21.0	26.5	21.0	26.5	22.0	13.5	11.0
16	15.0	7.0	22.0	17.0	28.5	21.0	29.0	21.0	26.0	23.5	12.0	10.5
17	15.5	9.0	20.0	16.5	26.5	22.0	27.0	20.0	26.5	22.0	16.0	10.5
18	15.5	9.0	21.0	16.5	25.5	18.5	28.0	20.0	26.5	23.0	18.5	14.0
19	15.5	9.0	22.0	16.5	26.5	20.0	28.0	20.5	26.5	21.5	18.5	15.5
20	11.5	8.0	22.0	16.0	26.5	21.0	29.0	21.5	24.5	21.5	18.5	15.0
21	8.0	6.0	20.0	16.0	29.0	21.0	26.5	22.0	25.0	20.5	16.0	13.5
22	10.0	5.0	19.5	15.0	29.5	23.0	28.0	21.0	24.5	19.5	16.0	13.5
23	15.0	6.0	21.0	13.5	25.5	20.5	28.5	21.5	24.0	19.0	15.0	11.0
24	16.5	9.0	21.0	15.5	26.5	18.5	26.0	21.0	23.0	19.0	11.0	8.0
25	14.0	11.0	19.5	14.0	29.0	20.0	24.0	20.5	24.5	19.5	9.0	6.0
26	15.5	10.0	16.0	13.5	28.0	20.0	24.0	20.0	26.5	21.0	9.5	7.0
27	12.0	4.5	19.0	13.0	28.0	20.0	25.5	18.5	26.0	20.5	8.5	7.0
28	12.0	2.0	19.5	11.5	27.0	20.0	25.0	19.0	24.5	20.0	7.0	6.0
29	10.0	5.0	20.0	13.5	27.0	20.0	24.5	19.0	24.5	20.0	9.5	5.0
30	11.0	4.5	25.5	16.5	26.5	19.5	26.0	19.5	23.0	19.0	10.5	7.0
31	---	---	---	---	---	---	26.0	21.5	22.0	18.0	---	---
MONTH	16.5	1.0	25.5	8.0	29.5	13.0	29.0	18.5	30.0	18.0	22.0	5.0

06775900 DISMAL RIVER NEAR THEDFORD, NE
(Hydrologic bench-mark station and Radiochemical program)

LOCATION.--Lat 41°46'45", long 100°31'30", in SE1/4NW1/4 sec.23, T.21 N., R.28 W., Thomas County, Hydrologic Unit 10210002, on right bank 1,400 ft downstream from bridge on U.S. Highway 83, 2 mi upstream from boundary of Nebraska National Forest (Bessey Division), and 14 mi south of Thedford.

DRAINAGE AREA.--960 mi², approximately, of which about 30 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,800.13 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--18 years, 193 ft³/s, 139,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,160 ft³/s Aug. 23, 1983, gage height, 3.83 ft; maximum gage height, 5.10 ft Dec. 18, 1983, backwater from ice; minimum daily discharge, 146 ft³/s Dec. 26, 30, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 407 ft³/s July 11, gage height, 2.14 ft; maximum gage height, 5.10 ft Dec. 18, backwater from ice; minimum daily discharge, 149 ft³/s Jan. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	194	206	212	188	191	197	197	203	201	188	182
2	197	200	212	197	188	203	215	203	195	205	210	181
3	200	200	209	191	194	206	203	206	194	199	216	178
4	200	194	212	236	197	200	203	206	196	229	199	183
5	188	200	227	221	188	191	227	206	198	228	196	181
6	188	203	224	221	177	209	227	200	194	222	186	182
7	182	203	218	233	200	206	242	194	191	196	196	186
8	188	203	224	227	212	203	233	191	193	193	185	188
9	185	203	227	221	194	209	233	200	204	193	184	192
10	191	194	233	227	200	200	215	200	200	216	182	203
11	194	194	239	233	206	206	224	206	199	271	180	203
12	185	203	239	239	197	203	221	206	194	202	178	196
13	194	200	239	206	194	212	206	206	198	196	178	198
14	200	197	233	215	203	215	197	200	203	198	178	195
15	194	194	227	203	197	215	203	200	197	194	184	196
16	188	194	224	203	188	212	200	203	208	188	182	197
17	185	203	203	200	188	203	200	197	209	192	179	199
18	197	206	190	171	206	209	200	200	200	186	180	197
19	200	218	190	160	200	209	200	215	193	186	176	202
20	194	206	190	149	194	209	203	206	196	187	184	209
21	185	206	190	154	209	206	249	215	193	200	196	204
22	188	206	185	163	203	206	230	212	196	225	179	205
23	188	206	180	185	200	203	218	206	191	225	176	208
24	185	215	180	174	203	212	230	206	191	214	176	198
25	182	218	175	180	188	215	224	200	194	218	178	190
26	185	230	180	200	200	221	218	200	197	223	181	198
27	185	233	190	194	185	215	203	206	197	219	179	197
28	191	188	190	200	174	203	188	197	206	210	176	187
29	182	206	174	200	185	200	212	197	203	198	178	195
30	191	194	174	182	---	206	203	194	191	197	178	198
31	188	---	206	182	---	203	---	199	---	200	177	---
TOTAL	5894	6111	6390	6179	5658	6401	6424	6274	5924	6411	5715	5828
MEAN	190	204	206	199	195	206	214	202	197	207	184	194
MAX	200	233	239	239	212	221	249	215	209	271	216	209
MIN	182	188	174	149	174	191	188	191	191	186	176	178
AC-FT	11690	12120	12670	12260	11220	12700	12740	12440	11750	12720	11340	11560

CAL YR 1983	TOTAL	73006	MEAN	200	MAX	463	MIN	154	AC-FT 144800
WTR YR 1984	TOTAL	73209	MEAN	200	MAX	271	MIN	149	AC-FT 145200

06775900 DISMAL RIVER NEAR THEDFORD, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)
NOV 21...	1635	210	173	7.6	6.5	676	10	10.2	37	72	72
FEB 15...	0955	200	182	7.8	7.0	681	30	9.5	K24	88	73
MAY 11...	1055	204	178	7.8	17.0	684	15	8.5	73	140	75
AUG 21...	1020	207	156	7.7	19.0	686	130	7.8	1300	K18000	66

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)
NOV 21...	0	23	3.6	6.7	.4	5.2	83	7.3	.90	.30	56
FEB 15...	0	23	3.7	7.6	.4	5.2	90	8.2	1.2	.30	33
MAY 11...	0	24	3.6	7.2	.4	5.3	85	7.8	.90	.30	53
AUG 21...	0	21	3.2	6.1	.3	4.9	75	8.6	.70	.30	4.8

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671)
NOV 21...	152	150	.21	86	.53	.060	.50	.300	.130	.050
FEB 15...	145	160	.20	78	.50	.050	.40	.300	.130	.150
MAY 11...	161	150	.22	89	.37	.050	1.4	.140	.120	.100
AUG 21...	138	95	.19	77	.39	<.010	2.4	.600	.150	.150

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)
NOV 21...	1635	90	4	50	<.5	<1	1	<3	<1	50	1
MAY 11...	1055	50	5	56	.6	<1	2	<3	1	26	<1

06775900 DISMAL RIVER NEAR THEDFORD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV										
21...	17	5	<.1	<10	2	1	<1	110	10	10
MAY										
11...	15	7	<.1	<10	1	<1	<1	120	10	19

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
NOV									
21...	1635	<3.1	<2.9	5.0	3.2	4.3	2.8	.10	.36

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
NOV							
21...	1635	210	6.5	331	188	5	6
FEB							
15...	0955	200	7.0	793	428	--	--
MAY							
11...	1055	204	17.0	657	362	--	--
AUG							
21...	1020	207	19.0	690	386	28	34

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)
NOV						
21...	--	8	19	42	90	100
FEB						
15...	--	--	23	65	96	100
MAY						
11...	--	--	20	61	94	100
AUG						
21...	40	44	57	79	97	100

PLATTE RIVER BASIN

06776500 DISMAL RIVER AT DUNNING, NE

LOCATION.--Lat 41°49'23", long 100°06'05", in sec.4, T.21 N., R.24 W., Blaine County, Hydrologic Unit 10210002, on right bank 100 ft downstream from bridge on State Highway 2 at southeast corner of Dunning and 1 mi upstream from mouth.

DRAINAGE AREA.--2,040 mi^2, approximately, of which about 45 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--March to June 1932, September 1945 to current year.

REVISED RECORDS.--WSP 2118: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,606.3 ft National Geodetic Vertical Datum of 1929. Mar. 1 to June 30, 1932, nonrecording gage at site 0.2 mi upstream at datum 0.5 ft lower. Sept. 13, 1945, to Apr. 19, 1956, nonrecording gage on bridge 100 ft upstream at present datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--39 years (1945-84), 323 ft^3/s, 234,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft^3/s June 13, 1983, gage height, 2.40 ft; maximum gage height observed, 5.21 ft Jan. 19, 1947, backwater from ice; minimum daily discharge, 100 ft^3/s Jan. 25, 1950, Jan. 9, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 448 ft^3/s Apr. 22, gage height, 1.03 ft; maximum gage height, 3.14 ft Jan. 8, backwater from ice; minimum daily discharge, 250 ft^3/s Jan. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	288	356	310	325	290	320	340	352	411	340	320	346
2	288	363	320	320	290	340	380	367	379	352	326	345
3	297	363	320	300	290	360	360	403	367	352	342	341
4	304	371	315	360	305	350	350	436	371	375	336	343
5	288	363	315	350	300	320	400	407	387	371	332	338
6	291	363	330	375	270	340	390	387	399	363	330	349
7	291	363	330	400	310	330	430	356	382	356	336	353
8	291	356	330	403	325	320	420	337	375	344	334	347
9	291	340	320	367	300	330	410	340	372	348	333	347
10	304	333	330	348	310	320	383	348	379	352	320	365
11	304	329	335	344	330	340	379	356	371	383	318	366
12	291	344	335	315	325	330	379	359	383	398	312	369
13	288	348	330	318	325	356	329	359	375	348	311	370
14	304	333	300	333	337	379	318	348	375	333	308	366
15	315	322	292	337	344	370	311	344	375	333	315	355
16	304	329	290	340	337	360	311	359	390	333	329	355
17	315	334	275	325	337	340	318	356	398	326	328	354
18	337	363	270	280	340	350	326	356	387	322	327	368
19	352	363	270	265	340	350	322	367	371	322	328	373
20	329	340	270	250	337	355	326	371	367	315	352	368
21	326	337	265	250	344	355	399	363	367	315	377	379
22	333	333	265	270	356	340	436	387	363	310	348	371
23	348	322	260	300	359	340	419	371	367	311	333	377
24	344	323	260	285	359	330	407	370	348	307	337	363
25	342	337	280	290	359	370	394	390	344	315	339	346
26	348	340	290	320	348	380	383	371	363	326	344	348
27	359	272	310	310	326	370	356	383	348	322	343	341
28	356	270	320	310	288	340	300	363	344	312	339	330
29	340	300	290	305	300	330	348	363	340	305	333	336
30	344	300	290	280	---	335	340	371	333	305	329	350
31	352	---	320	280	---	340	---	383	---	311	332	---
TOTAL	9864	10110	9337	9855	9381	10690	10964	11423	11131	10405	10291	10659
MEAN	318	337	301	318	323	345	365	368	371	336	332	355
MAX	359	371	335	403	359	380	436	436	411	398	377	379
MIN	288	270	260	250	270	320	300	337	333	305	308	330
AC-FT	19570	20050	18520	19550	18610	21200	21750	22660	22080	20640	20410	21140

CAL YR 1983 TOTAL 126090 MEAN 345 MAX 672 MIN 260 AC-FT 250100

WTR YR 1984 TOTAL 124110 MEAN 339 MAX 436 MIN 250 AC-FT 246200

06779000 MIDDLE LOUP RIVER AT ARCADIA, NE

LOCATION.--Lat 41°25'20", long 99°08'10", in sec.26, T.17 N., R.16 W., Valley County, Hydrologic Unit 10210003, on left bank 80 ft downstream from bridge on State Highway 70 at southwest edge of Arcadia.

DRAINAGE AREA.--5,040 mi², approximately, of which about 820 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July 1937 to current year.

REVISED RECORDS.--WDR NE-72: Drainage area. WDR NE-82-1: 1981(M).

GAGE.--Water-stage recorder. Datum of gage is 2,146.30 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 23, 1938, nonrecording gage at bridge just upstream at datum 1.23 ft lower.

REMARKS.--Records poor. Middle Loup Public Power and Irrigation District began diversion above station Mar. 30, 1938. Farwell Irrigation District canal began diversion from river in November 1962 at point 8 mi above station.

AVERAGE DISCHARGE.--22 years (1962-84), 677 ft³/s, 490,500 acre-ft/yr since diversion to Farwell Irrigation District canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 18,500 ft³/s June 22, 1947, gage height, 6.24 ft; maximum discharge computed, 9,700 ft³/s May 27, 1945, gage height, 5.12 ft; maximum gage height, 6.41 ft Mar. 27, 1960, backwater from ice; minimum daily discharge, 6.0 ft³/s July 23, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,150 ft³/s Apr. 21, gage height, 3.34 ft; maximum gage height, 4.98 ft Dec. 2, backwater from ice; minimum daily discharge, 73 ft³/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	502	854	1400	800	2100	1200	1200	1060	860	372	260	73
2	484	955	1450	800	2000	1200	1400	1180	880	371	336	116
3	551	1010	1450	1000	1850	1160	1800	1200	900	339	265	142
4	791	979	1450	1160	1700	1100	1660	1200	920	310	242	130
5	804	1000	1300	1000	1500	1140	1520	1220	940	302	251	90
6	830	1010	1400	1100	1400	1160	1900	1700	940	282	230	97
7	844	1030	1350	1300	1300	1100	1960	1600	920	289	184	149
8	914	1040	1300	1500	1300	1060	1740	1020	920	276	124	204
9	1000	1330	1200	1700	1350	960	1700	1100	900	264	99	229
10	1130	1210	1100	1800	1350	920	1620	1160	960	278	88	234
11	1240	1060	1100	1700	1300	920	1560	1120	980	234	81	263
12	1020	1070	1060	1500	1250	920	1500	1080	1000	201	85	325
13	988	1050	1060	1500	1250	910	1460	1100	940	130	82	355
14	1000	1080	1100	1500	1200	1000	1320	1000	900	116	86	364
15	1050	989	1000	1400	1200	1100	1260	960	880	107	88	398
16	1030	906	900	1350	1200	1060	1040	940	880	116	169	406
17	915	1000	860	1300	1160	1060	980	940	900	101	158	411
18	847	970	740	1300	1100	1020	900	920	920	94	199	430
19	781	900	700	1200	1100	1000	840	920	900	88	203	420
20	851	1020	700	1350	1100	1000	800	920	860	92	187	420
21	861	959	760	1200	1160	1020	2400	900	820	92	509	407
22	871	912	700	1100	1160	1020	2200	900	780	79	862	400
23	927	913	700	1000	1200	1040	1100	900	760	77	361	425
24	888	921	600	1050	1140	1040	800	940	760	78	322	472
25	785	932	600	1200	1140	1080	740	960	780	108	322	866
26	789	763	700	1300	1100	1160	800	920	680	113	322	615
27	780	1000	840	1450	1160	1200	780	900	594	142	263	538
28	785	1100	860	1500	1200	1140	760	880	556	123	213	707
29	844	1250	860	1700	1200	1100	800	820	468	112	105	633
30	825	1300	860	1900	---	1080	1500	860	411	100	76	538
31	899	---	860	2000	---	1040	---	880	---	113	74	---
TOTAL	26826	30513	30960	41660	38170	32910	40040	32200	24909	5499	6846	10857
MEAN	865	1017	999	1344	1316	1062	1335	1039	830	177	221	362
MAX	1240	1330	1450	2000	2100	1200	2400	1700	1000	372	862	866
MIN	484	763	600	800	1100	910	740	820	411	77	74	73
AC-FT	53210	60520	61410	82630	75710	65280	79420	63870	49410	10910	13580	21530

CAL YR 1983 TOTAL 335358 MEAN 919 MAX 4140 MIN 95 AC-FT 665200
WTR YR 1984 TOTAL 321390 MEAN 878 MAX 2400 MIN 73 AC-FT 637500

06783500 MUD CREEK NEAR SWEETWATER, NE

LOCATION.--Lat 41°02'15", long 98°59'35", in NE1/4SE1/4 sec.3, T.12 N., R.15 W., Buffalo County, Hydrologic Unit 10210005, on right bank 12 ft downstream from bridge on State Highway 2, 0.9 mi southeast of Sweetwater, and 11.6 mi upstream from mouth.

DRAINAGE AREA.--707 mi^2, of which 655 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1946 to current year.

REVISED RECORDS.--WDR NE-72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,013.69 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Minor irrigation developments above station.

AVERAGE DISCHARGE.--38 years, 39.3 ft^3/s, 28,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 27,000 ft^3/s June 22, 1947, gage height, 23.20 ft; maximum discharge computed, 5,600 ft^3/s June 24, 1968, gage height, 20.07 ft; no flow at times in 1955-56.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1929, that of June 22, 1947, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 550 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 12	0130	*2420	18.90	July 4	1100	1040	16.00
June 25	0900	1020	15.88				

Minimum daily discharge, 9.2 ft^3/s Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	18	17	21	80	47	40	87	38	68	32	18
2	9.2	18	17	21	70	35	41	97	37	68	33	19
3	10	22	18	21	65	33	49	92	36	65	77	22
4	13	19	18	21	60	33	53	80	35	641	38	21
5	11	18	18	23	50	33	59	72	35	130	36	20
6	9.8	18	18	26	45	32	60	84	36	70	31	18
7	10	19	18	29	47	32	67	89	38	71	31	19
8	10	18	19	31	50	30	94	108	35	59	30	17
9	9.7	18	20	33	58	35	118	110	33	53	27	15
10	9.6	18	19	33	52	34	90	88	33	54	27	16
11	11	19	18	33	50	40	84	76	120	75	26	16
12	11	19	18	32	49	40	74	70	2030	76	24	17
13	11	19	18	31	44	37	66	63	1700	53	20	17
14	11	20	18	28	45	34	60	57	1070	45	21	16
15	11	19	19	25	40	35	57	53	203	40	18	16
16	12	19	19	27	38	36	54	51	172	41	19	16
17	12	19	19	28	37	39	51	50	219	44	24	17
18	12	19	19	29	36	38	49	54	214	44	22	17
19	13	20	20	29	35	40	47	60	193	39	23	17
20	13	22	20	27	45	54	50	53	122	38	26	16
21	13	22	20	27	56	43	190	49	123	43	33	15
22	13	22	20	27	52	42	241	47	89	37	36	15
23	14	21	19	27	50	48	228	44	122	32	32	14
24	14	21	19	28	45	45	188	43	85	31	35	15
25	14	20	19	29	56	43	121	43	605	35	26	15
26	15	19	19	30	55	43	96	45	208	39	22	16
27	15	18	19	32	54	43	84	46	112	39	23	16
28	15	18	20	40	50	41	75	49	83	39	24	16
29	15	18	20	70	43	42	73	42	72	40	20	16
30	16	17	20	65	---	43	83	40	69	40	18	16
31	17	---	21	90	---	42	---	39	---	37	18	---
TOTAL	381.3	577	586	1013	1457	1212	2642	1981	7967	2186	872	504
MEAN	12.3	19.2	18.9	32.7	50.2	39.1	88.1	63.9	266	70.5	28.1	16.8
MAX	17	22	21	90	80	54	241	110	2030	641	77	22
MIN	9.2	17	17	21	35	30	40	39	33	31	18	14
AC-FT	756	1140	1160	2010	2890	2400	5240	3930	15800	4340	1730	1000

CAL YR 1983	TOTAL	11602.9	MEAN	31.8	MAX	793	MIN	7.8	AC-FT	23010
WTR YR 1984	TOTAL	21378.3	MEAN	58.4	MAX	2030	MIN	9.2	AC-FT	42400

06783500 MUD CREEK NEAR SWEETWATER, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
OCT 28...	1350	16	625	8.4	10.0	11.1	21	140	740	290	91
NOV 22...	1110	22	633	8.4	2.0	12.0	18	190	2700	290	91
DEC 22...	1345	20	698	7.5	.5	4.8	16	520	1600	320	100
JAN 18...	1135	29	755	7.6	.5	6.8	16	730	1400	310	97
FEB 15...	1105	40	627	8.1	.5	11.6	23	480	13000	280	87
MAR 15...	1320	36	670	8.2	4.0	10.8	24	330	1800	310	97
APR 19...	1310	47	723	8.2	12.5	9.5	39	--	280	330	100
MAY 17...	1345	50	762	8.1	18.0	7.4	56	400	240	340	100
JUN 13...	1000	1770	176	7.6	17.5	5.1	140	K40000	35000	71	22
JUL 12...	1010	75	610	7.9	21.0	6.3	67	9700	14000	280	86
AUG 01...	1435	30	655	8.1	24.0	7.2	36	440	740	300	95
SEP 06...	1310	16	634	7.7	18.5	8.1	--	K720	1000	310	96

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 28...	16	23	15	111	.20	.040	.96	1.0	1.2	.370	5.6
NOV 22...	15	27	11	3	.90	.100	1.0	1.1	2.0	.410	3.7
DEC 22...	18	29	16	10	1.7	.440	.66	1.1	2.8	.590	2.6
JAN 18...	16	32	19	14	1.8	.900	.30	1.2	3.0	.540	4.2
FEB 15...	15	28	12	91	1.5	.810	.99	1.8	3.3	.690	5.9
MAR 15...	17	29	13	112	1.8	.420	.98	1.4	3.2	.670	3.9
APR 19...	19	40	13	151	2.1	.260	1.6	1.9	4.0	.910	8.5
MAY 17...	21	45	17	282	2.0	.050	1.5	1.5	3.5	.800	15
JUN 13...	4.0	13	2.0	2050	1.6	.330	6.2	6.5	8.1	1.70	51
JUL 12...	16	30	10	922	2.2	.040	.86	.90	3.1	1.10	23
AUG 01...	16	28	9.4	183	1.5	.060	1.6	1.7	3.2	1.10	10
SEP 06...	16	25	8.9	70	1.6	.050	.85	.90	2.5	.690	5.8

06783500 MUD CREEK NEAR SWEETWATER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)
NOV 22...	1110	0	19	.5	10	295	.20	38	390	.53	23
FEB 15...	1105	0	17	.5	12	289	.20	40	380	.52	42
MAY 17...	1345	0	22	.5	16	336	.30	42	460	.63	63
AUG 01...	1435	0	16	.4	13	305	.30	53	410	.56	34

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
NOV 22...	.90	.360	6	100	--	50	<1	10	6	540
FEB 15...	1.5	.540	--	--	--	50	--	--	--	--
MAY 17...	2.0	.700	10	<100	<100	70	<1	20	12	7000
AUG 01...	1.4	.750	--	--	--	70	--	--	--	--

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE) (01044)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN) (01054)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
NOV 22...	530	10	3	70	30	38	.1	2	<1	30
FEB 15...	--	30	--	--	--	85	--	--	--	--
MAY 17...	7000	12	6	440	420	25	.2	4	<1	50
AUG 01...	--	9	--	--	--	28	--	--	--	--

06784000 SOUTH LOUP RIVER AT ST. MICHAEL, NE

LOCATION.--Lat 41°01'53", long 98°44'25", in NW1/4NW1/4 sec.12, T.12 N., R.13 W., Buffalo County, Hydrologic Unit 10210004, 5 ft downstream and 30 ft shoreward from right downstream corner of county highway bridge, 0.6 mi northeast of St. Michael, and 3.4 mi upstream from Sweet Creek.

DRAINAGE AREA.--2,350 mi^2, approximately, of which about 1,610 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year.

REVISED RECORDS.--WDR NE-74: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,921.26 ft National Geodetic Vertical Datum of 1929. Prior to June 22, 1947, water-stage recorder, and June 25 to Sept. 30, 1947, nonrecording gage, at present site at datum 2.00 ft higher. Oct. 1, 1947, to July 3, 1958, nonrecording gage at present site and datum. July 4, 1958, to Sept. 7, 1960, water-stage recorder at site 600 ft upstream at present datum. Sept. 8, 1960, to June 24, 1968, water-stage recorder at site 100 ft upstream at present datum. June 25 to Nov. 21, 1968, nonrecording gage at present site and datum. Nov. 22, 1968, to May 19, 1981, water-stage recorder at site 40 ft upstream at present datum. May 20 to July 16, 1981, water-stage recorder at site 70 ft upstream at present datum.

REMARKS.--Records good except those for winter period, which are poor. Minor irrigation developments above station.

AVERAGE DISCHARGE.--41 years, 239 ft^3/s, 173,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 50,000 ft^3/s June 22, 1947, gage height, 12.0 ft, present datum, from graph based on gage readings; maximum discharge computed, 27,500 ft^3/s June 24, 1968, gage height, 11.00 ft; no flow Aug. 5-8, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,800 ft^3/s June 13, gage height, 10.73 ft; minimum daily discharge, 85 ft^3/s Nov. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	167	100	210	750	276	354	624	240	197	132	100
2	117	172	140	220	700	272	400	542	228	204	124	104
3	124	228	190	230	650	263	[illegible]	586	210	204	146	109
4	131	268	200	250	600	286	[illegible]	493	200	1050	197	115
5	128	205	210	250	550	312	461	433	200	665	191	116
6	124	186	210	250	520	286	507	496	210	347	149	117
7	120	185	210	250	475	283	472	628	240	291	135	111
8	118	187	210	250	410	252	492	499	230	249	130	116
9	124	196	210	250	435	228	518	406	225	222	127	116
10	134	195	210	250	415	229	449	397	220	220	117	112
11	136	190	210	250	385	226	447	388	235	221	113	115
12	133	190	210	250	346	232	484	373	6260	246	115	117
13	133	190	210	250	330	247	414	371	7250	224	110	114
14	136	187	210	240	352	281	377	352	2520	240	105	112
15	137	187	200	230	272	287	370	318	1050	224	101	120
16	137	186	200	200	281	293	336	298	716	182	98	121
17	146	191	190	200	245	306	314	291	796	166	98	122
18	142	191	175	200	269	296	312	433	742	157	100	123
19	144	211	175	200	272	257	302	400	623	151	101	121
20	141	215	175	200	285	261	235	325	550	138	104	116
21	145	203	175	190	277	298	1500	300	495	139	152	112
22	148	200	180	180	272	365	1820	300	400	142	188	106
23	148	189	180	180	285	361	1030	290	358	134	238	109
24	145	181	185	190	308	355	744	290	383	125	207	112
25	147	177	185	220	280	360	560	290	826	127	165	115
26	147	174	185	250	280	360	579	303	464	130	138	112
27	148	96	190	300	285	345	532	310	324	137	127	114
28	146	90	190	375	259	340	451	310	264	140	117	118
29	145	85	190	500	277	335	488	350	225	141	110	122
30	148	85	200	700	---	361	575	300	208	139	103	125
31	159	---	200	800	---	361	---	260	---	139	103	---
TOTAL	4244	5407	5905	8515	11065	9214	16462	11956	26892	7091	4141	3442
MEAN	137	180	190	275	382	297	549	386	896	229	134	115
MAX	159	268	210	800	750	365	1820	628	7250	1050	238	125
MIN	113	85	100	180	245	226	235	260	200	125	98	100
AC-FT	8420	10720	11710	16890	21950	18280	32650	23710	53340	14060	8210	6830

CAL YR 1983	TOTAL	80553	MEAN	221	MAX	993	MIN	64	AC-FT	159800
WTR YR 1984	TOTAL	114334	MEAN	312	MAX	7250	MIN	85	AC-FT	226800

06784000 SOUTH LOUP RIVER AT ST. MICHAEL, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-53, 1974 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: June 1946 to June 1953.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily, 19,300 mg/L June 19, 1946; minimum daily, 13 mg/L Dec. 30, 31, 1951.
SEDIMENT LOADS: Maximum daily, 672,000 tons June 22, 1947; minimum daily, 6.1 tons Dec. 30, 31, 1951.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)
OCT 28...	1050	143	416	8.5	10.0	10.1
NOV 22...	1420	203	437	8.3	1.5	12.2
DEC 22...	1010	179	508	7.5	.5	6.6
JAN 18...	1000	201	492	7.6	.5	7.4
FEB 15...	0910	302	422	8.2	2.5	11.5
MAR 15...	1015	284	462	8.2	4.0	11.1
APR 19...	0955	298	498	8.2	11.5	9.8
MAY 17...	1040	293	516	8.5	19.0	9.7
JUN 13...	1400	5660	192	7.5	19.5	5.6
JUL 11...	1320	242	474	8.4	27.0	9.8
AUG 01...	1030	139	433	8.5	25.5	9.8
SEP 06...	1000	119	429	7.9	19.0	11.2

DATE	TIME	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
FEB 15...	0910	140	190	0	59	9.3	12	.4	8.8	200	22
JUL 11...	1320	100	210	6	66	12	15	.5	11	209	29

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB 15...	4.9	.30	42	280	.38	227	.92	.530	40	35	6
JUL 11...	7.4	.30	49	320	.43	206	.10	.150	50	14	4

06784200 SHERMAN RESERVOIR NEAR LOUP CITY, NE

LOCATION.--Lat 41°18'10", long 98°52'45", in SW1/4NW1/4 sec.1, T.15 N., R.14 W., Sherman County, Hydrologic Unit 10210003, in control house of outlet works of Sherman Dam, 5 mi northeast of Loup City.

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Mercury-column pressure gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam; closure date of dam, August 1960. First diversions from Middle Loup River, Nov. 8, 1962. Usable capacity, 65,237 acre-ft between elevations 2,118.5 ft, sill of canal outlet works, and 2,162.3 ft, crest of spillway. Dead and inactive storage, 3,839 acre-ft below elevation 2,118.5 ft. Figures given herein represent total contents. Water used for irrigation of Farwell Unit of Bureau of Reclamation.

COOPERATION.--Records of elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 70,230 acre-ft June 22, 1975, elevation, 2,162.7 ft; minimum observed since appreciable storage was attained, 9,450 acre-ft Aug. 2, 1980, elevation, 2,127.7 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 69,360 acre-ft June 12-22, elevation, 2,162.4 ft; minimum observed, 33,280 acre-ft Sept. 7-8, elevation, 2,146.8 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,156.2	52,970	-
Oct. 31	2,157.2	55,420	+2,450
Nov. 30	2,156.8	54,430	-990
Dec. 31	2,156.5	53,700	-730
CAL YR 1983	-	-	+250
Jan. 31	2,156.1	52,720	-980
Feb. 29	2,155.7	51,770	-950
Mar. 31	2,155.5	51,290	-480
Apr. 30	2,158.4	58,460	+7,170
May 31	2,162.1	68,500	+10,040
June 30	2,162.2	68,790	+290
July 31	2,156.1	52,720	-16,070
Aug. 31	2,148.7	36,780	-15,940
Sept. 30	2,153.1	45,810	+9,030
WTR YR 1984	-	-	-7,160

06784800 TURKEY CREEK NEAR DANNEBROG, NE

LOCATION.--Lat 41°09'24", long 98°33'22", in SW1/4NW1/4 sec.26, T.14 N., R.11 W., Howard County, Hydrologic Unit 10210003, on left bank 25 ft downstream from bridge on State Highway 11, 2.8 mi north of Dannebrog, and 10 mi upstream from mouth.

DRAINAGE AREA.--66.2 mi^2.

PERIOD OF RECORD.--May 1966 to September 1970, October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,870.35 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Records good except those for winter period, which are poor. Low flow includes return water from Farwell Irrigation District.

AVERAGE DISCHARGE.--6 years (1979-84), 19.8 ft^3/s, 14,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,680 ft^3/s June 14, 1967, gage height, 19.21 ft; maximum gage height, 19.26 ft June 12, 1983; no flow May 17-20, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,790 ft^3/s June 12, gage height, 19.26 ft; minimum daily, 7.6 ft^3/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	12	10	10	43	18	24	121	19	22	39	33
2	7.9	12	11	10	36	20	32	53	18	23	39	34
3	9.5	29	11	10	26	21	175	52	17	22	42	34
4	12	19	12	12	24	30	148	38	17	26	42	42
5	10	12	12	13	20	25	132	39	17	25	39	40
6	8.0	11	11	16	18	21	71	243	18	50	39	39
7	8.0	10	12	20	18	21	77	180	17	35	41	34
8	8.6	10	13	21	18	19	61	40	16	24	37	34
9	8.2	13	12	19	18	18	40	32	16	22	33	27
10	8.5	13	12	14	20	18	35	30	16	21	29	23
11	9.6	11	12	13	20	20	72	29	57	21	30	23
12	8.9	11	12	12	20	17	83	28	1480	20	27	20
13	8.6	12	12	11	18	24	37	26	505	21	27	14
14	9.0	11	12	10	18	38	32	24	54	21	28	12
15	9.1	11	12	9.0	20	44	29	24	91	24	27	12
16	9.0	10	11	8.5	19	24	27	23	266	26	30	12
17	8.4	11	10	8.5	17	20	26	22	260	26	31	12
18	8.5	12	10	8.5	16	20	24	101	77	30	31	12
19	10	19	10	8.0	15	18	23	43	43	34	34	12
20	10	18	10	8.0	15	20	23	28	35	36	35	9.5
21	9.3	12	10	8.5	17	44	25	25	33	41	61	8.1
22	9.5	11	10	8.5	20	75	30	29	31	41	51	8.2
23	11	11	10	9.0	23	57	40	23	39	41	31	8.4
24	9.7	10	9.0	9.5	22	53	45	22	36	37	27	8.2
25	9.4	11	9.0	10	23	44	35	28	30	35	54	7.8
26	9.7	11	9.0	14	22	63	30	23	33	36	34	7.7
27	10	12	9.0	22	20	51	28	24	28	38	29	7.6
28	11	11	9.0	74	18	33	25	23	25	38	24	8.2
29	10	10	9.5	164	17	27	42	20	23	35	24	7.7
30	10	10	10	113	---	25	137	20	23	34	25	7.7
31	11	---	10	59	---	24	---	19	---	37	26	---
TOTAL	290.5	376	331.5	733.0	601	952	1608	1432	3340	942	1066	558.1
MEAN	9.37	12.5	10.7	23.6	20.7	30.7	53.6	46.2	111	30.4	34.4	18.6
MAX	12	29	13	164	43	75	175	243	1480	50	61	42
MIN	7.9	10	9.0	8.0	15	17	23	19	16	20	24	7.6
AC-FT	576	746	658	1450	1190	1890	3190	2840	6620	1870	2110	1110

CAL YR 1983 TOTAL 8851.2 MEAN 24.2 MAX 960 MIN 7.5 AC-FT 17560
WTR YR 1984 TOTAL 12230.1 MEAN 33.4 MAX 1480 MIN 7.6 AC-FT 24260

06785000 MIDDLE LOUP RIVER AT ST. PAUL, NE

LOCATION.--Lat 41°12'13", long 98°26'46", in SE1/4NW1/4NE1/4 sec.10, T.14 N., R.10 W., Howard County, Hydrologic Unit 10210003, on left bank at St. Paul, 20 ft upstream from bridge on U.S. Highway 281 and 6 mi upstream from confluence with North Loup River.

DRAINAGE AREA.--8,090 mi^2, approximately, of which about 3,130 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to September 1915, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1036: 1943. WSP 1390: 1896, 1903, 1928(M), 1944. WDR NE-72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,776.61 ft National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to June 5, 1957. June 5, 1957, to Mar. 16, 1978, water-stage recorder on left bank 430 ft upstream at same datum. Mar. 17 to May 31, 1978, nonrecording gage on railroad bridge 30 ft upstream at same datum.

REMARKS.--Records poor. Diversions above station for irrigation.

AVERAGE DISCHARGE.--77 years, 1,192 ft^3/s, 863,600 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,000 ft^3/s June 23, 1947, gage height, 12.69 ft, site then in use, present datum, from rating curve extended above 55,000 ft^3/s; minimum daily since 1929, 23 ft^3/s Aug. 9, 10, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,100 ft^3/s June 12, gage height, 6.46 ft; minimum daily, 269 ft^3/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	590	1230	1600	1200	3500	1640	1500	2380	1950	853	412	269
2	623	915	1650	1400	3500	1780	1890	1670	1860	719	510	275
3	716	1300	1750	1500	3400	1710	2670	1760	1700	755	1280	293
4	730	1370	1650	1300	3200	1820	2890	1360	1420	1820	1180	374
5	797	1310	1600	1300	3000	1890	2550	1490	1440	2000	964	460
6	791	1300	1650	1400	2900	1760	2150	1800	1760	1660	803	426
7	788	1260	1650	1500	2800	1650	2340	2800	1710	1040	761	349
8	820	1130	1550	1700	2700	1600	2410	1570	1550	850	749	310
9	936	1300	1400	1900	2700	1500	2230	1330	1570	766	619	351
10	1040	1300	1350	1900	3000	1500	2020	1420	1370	728	446	405
11	1180	1180	1350	1900	3000	1550	2160	1410	2580	797	375	439
12	1300	1080	1250	1850	2800	1600	2160	1410	21800	801	363	496
13	1280	1120	1200	1800	2700	1710	2020	1510	16100	727	353	639
14	1200	1100	1220	1800	2600	1840	1800	1390	5410	620	344	767
15	1200	1180	1350	1750	2500	1870	1650	1320	3650	537	331	869
16	1140	1240	1250	1700	2510	1980	1570	1290	3780	467	365	907
17	1260	1280	1160	1600	2460	1750	1320	1450	3020	422	349	1020
18	1060	1310	960	1500	2510	1670	1180	2100	2620	454	401	974
19	1160	1410	800	1500	1970	1660	1190	2310	2240	436	416	906
20	1180	1450	900	1550	1670	1780	1230	1990	1470	444	536	971
21	1240	1380	860	1400	1960	1610	5020	1580	1110	449	1060	764
22	1240	1320	800	1300	1990	1920	6940	1640	1240	435	1660	631
23	1320	1220	820	1200	1830	1830	3780	1460	1210	448	2330	626
24	1180	1380	800	1100	1770	1750	2650	1520	1510	418	1830	582
25	1290	1220	760	1100	1750	1730	2210	2420	2200	388	1500	631
26	1030	1320	860	1300	1780	1840	2240	1680	1870	380	1320	909
27	1120	1200	1020	1750	1890	1990	1750	1620	1410	467	1020	936
28	1220	1400	1060	2500	1820	2120	1360	1720	1370	474	864	808
29	1310	1500	1060	3000	1660	1750	1590	1670	1250	480	581	766
30	1230	1550	1060	3300	---	1720	2250	1660	1060	421	481	741
31	1090	---	1060	3500	---	1500	---	1880	---	409	326	---
TOTAL	33061	32255	37450	53500	71870	54020	68720	52610	93230	21665	24529	18894
MEAN	1066	1275	1208	1726	2478	1743	2291	1697	3108	699	791	630
MAX	1320	1550	1750	3500	3500	2120	6940	2800	21800	2000	2330	1020
MIN	590	915	760	1100	1660	1500	1180	1290	1060	380	326	269
AC-FT	65580	75880	74280	106100	142600	107100	136300	104400	184900	42970	48650	37480

CAL YR 1983 TOTAL 457303 MEAN 1253 MAX 5210 MIN 282 AC-FT 907100
WTR YR 1984 TOTAL 567804 MEAN 1551 MAX 21800 MIN 269 AC-FT 1126000

06785000 MIDDLE LOUP RIVER AT ST. PAUL, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)
OCT 25...	1340	1290	285	8.4	11.0	10.2
NOV 21...	1400	1600	299	8.2	4.5	11.3
DEC 27...	1220	1010	360	7.5	.5	7.8
JAN 16...	1310	1720	330	7.5	.5	9.2
FEB 16...	1100	2410	262	8.0	.5	13.0
MAR 13...	1450	1610	322	8.1	7.0	11.3
APR 16...	1340	1650	385	8.1	14.0	9.7
MAY 14...	1410	1400	383	8.4	21.5	8.9
JUN 11...	1340	1340	312	8.3	21.0	9.1
JUL 09...	1255	753	418	8.4	28.0	8.1
AUG 02...	1245	431	389	8.4	28.5	8.2
SEP 04...	1215	384	403	8.2	22.5	8.5

DATE	TIME	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
FEB 16...	1100	120	110	0	34	5.5	8.4	.4	6.5	121	12
JUL 09...	1255	110	180	2	56	10	14	.5	11	179	24

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB 16...	2.3	.30	42	180	.25	1190	.60	.190	30	33	9
JUL 09...	5.7	.40	46	270	.37	558	1.0	.190	40	23	2

06786000 NORTH LOUP RIVER AT TAYLOR, NE

LOCATION.--Lat 41°46'37", long 99°22'45", in NE1/4SE1/4 sec.22, T.21 N., R.18 W., Loup County, Hydrologic Unit 10210006, on left bank 64 ft downstream from bridge on U.S. Highway 183 and 0.4 mi north of Taylor.

DRAINAGE AREA.--2,280 mi², approximately, of which about 180 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--November 1936 to current year.

REVISED RECORDS.--WSP 856: 1937. WSP 1310: 1939(M). WSP 1730: 1956-57(M). WSP 1918: 1952. WDR NE-72: Drainage area. WDR NE-75: 1974.

GAGE.--Water-stage recorder. Datum of gage is 2,248.21 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 28, 1938, nonrecording gage at same site ~~and datum~~. Sept. 28, 1938, to July 16, 1958, water-stage recorder at site 450 ft upstream at same datum.

REMARKS.--Records fair except those for winter period, which are poor. North Loup Public Power and Irrigation District canal began diversion from river in April 1939 at point 5 mi above station. Several smaller diversions above station for irrigation.

AVERAGE DISCHARGE.--47 years (1937-84), 465 ft³/s, 336,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,210 ft³/s June 27, 1983, gage height, 5.94 ft; maximum gage height, 9.5 ft Feb. 25, 1957, ice jam, from floodmarks; minimum daily discharge, 45 ft³/s July 26, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,420 ft³/s Apr. 7, gage height, 5.04 ft; maximum gage height, 5.50 ft Dec. 9, backwater from ice; minimum daily discharge, 196 ft³/s Aug. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	656	674	570	580	940	703	760	841	611	442	262	295
2	661	692	525	540	920	836	782	779	617	447	411	310
3	677	751	600	640	880	851	816	758	532	434	394	312
4	709	725	665	720	880	823	782	847	585	465	420	319
5	711	712	660	840	820	769	816	963	555	522	420	332
6	683	689	635	820	780	798	960	842	576	493	340	355
7	662	687	640	840	820	715	1160	622	576	466	293	365
8	655	715	645	800	865	561	1300	634	551	428	306	393
9	675	763	650	780	1000	518	1200	605	561	418	306	407
10	710	650	655	760	1300	707	979	588	536	387	270	438
11	729	611	650	740	1200	718	1010	624	558	385	260	478
12	718	638	640	720	1050	707	853	636	615	535	238	510
13	696	674	640	680	938	697	819	642	591	367	215	498
14	694	648	620	700	987	851	565	605	607	303	201	514
15	729	596	600	700	1010	851	657	573	557	291	196	543
16	750	548	540	680	939	828	668	559	708	291	216	535
17	749	549	500	675	911	718	664	562	896	302	247	531
18	768	571	470	680	794	676	635	507	1000	315	234	524
19	894	614	450	720	653	760	581	534	906	278	226	517
20	840	618	430	580	732	666	576	534	885	353	303	486
21	740	572	420	500	737	828	751	529	890	302	695	485
22	717	603	420	540	711	839	953	543	799	260	562	482
23	727	609	450	560	756	760	724	507	805	243	477	489
24	723	588	430	600	821	760	566	485	624	276	419	517
25	699	573	450	620	846	750	591	546	500	273	410	502
26	670	487	500	660	844	805	679	508	598	308	409	470
27	647	451	480	700	808	839	599	580	522	327	392	467
28	659	450	470	720	547	816	530	649	467	325	333	469
29	648	470	460	760	546	707	597	589	444	319	286	498
30	642	500	460	720	---	697	707	529	444	290	276	539
31	652	---	490	840	---	697	---	525	---	266	271	---
TOTAL	21890	18428	16815	21415	25035	23251	23280	19245	19116	11111	10289	13580
MEAN	706	614	542	691	863	750	776	621	637	358	332	453
MAX	894	763	665	840	1300	851	1300	963	1000	535	695	543
MIN	642	450	420	500	546	518	530	485	444	243	196	295
AC-FT	43420	36550	33350	42480	49660	46120	46180	38170	37920	22040	20410	26940

CAL YR 1983 TOTAL 230976 MEAN 633 MAX 2490 MIN 220 AC-FT 458100
WTR YR 1984 TOTAL 223454 MEAN 611 MAX 1300 MIN 196 AC-FT 443200

AVAILABLE

06787000 CALAMUS RIVER NEAR HARROP, NE

LOCATION.--Lat 41°56'48", long 99°23'10" in NW1/4SE1/4 sec.22, T.23 N., R.18 W., Loup County, Hydrologic Unit 10210008, on right bank 44 ft upstream from bridge on U.S. Highway 183, 12.2 mi north of Taylor.

DRAINAGE AREA.--983 mi², most of which does not contribute directly to surface runoff.

PERIOD OF RECORD.--March to July 1932. August 1931 to February 1932, July 1932 to June 1939, 1955-64 and 1977, gage heights or discharge measurements only. June 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,260 ft from topographic map. Prior to June 5, 1978, staff gage or reference point at same site at datum 1.0 ft higher.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation above station.

AVERAGE DISCHARGE.--6 years, 278 ft³/s, 176,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft³/s May 4, 1964, gage height, 4.80 ft, from floodmark; minimum daily discharge, 90 ft³/s Jan. 7, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 486 ft³/s Apr. 8, gage height, 2.47 ft; maximum gage height, 2.79 ft Dec. 24; minimum daily discharge, 136 ft³/s Nov. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236	238	284	242	349	292	303	431	244	236	232	220
2	234	239	278	251	362	302	317	436	248	238	233	220
3	239	250	262	270	336	308	334	436	244	240	237	225
4	251	246	271	285	332	313	332	418	252	242	244	225
5	244	240	275	313	295	303	368	403	252	245	237	225
6	241	241	269	334	264	296	401	411	257	244	233	230
7	238	234	257	327	275	292	453	403	257	238	232	230
8	231	233	250	318	280	256	466	376	254	235	234	230
9	229	244	257	296	287	260	454	351	246	249	235	235
10	233	242	257	270	298	262	431	336	246	268	237	240
11	236	236	273	265	304	279	423	327	241	264	231	260
12	230	241	265	260	311	273	434	317	248	261	228	260
13	227	251	262	244	294	279	427	306	249	252	224	255
14	228	255	219	247	304	311	444	296	249	244	222	250
15	233	248	202	248	332	357	436	287	241	257	225	255
16	232	243	215	248	353	429	413	284	316	254	225	260
17	232	241	233	245	333	399	394	276	338	250	233	255
18	242	241	271	244	324	376	369	274	373	252	230	250
19	285	243	259	249	261	334	345	270	389	242	225	250
20	270	242	252	250	292	327	327	263	431	246	240	240
21	259	237	250	255	290	354	375	259	445	235	260	235
22	250	238	245	239	290	386	431	262	393	226	250	230
23	247	235	245	241	305	407	437	252	333	222	245	225
24	244	228	240	252	316	397	437	248	293	234	235	220
25	236	236	240	263	322	375	409	257	265	241	230	220
26	237	234	235	270	327	363	382	253	264	279	225	225
27	237	176	235	261	318	363	389	262	254	279	220	235
28	234	136	240	281	297	345	368	267	246	264	220	233
29	228	156	245	310	285	331	387	253	240	245	220	236
30	229	230	250	321	---	320	414	239	235	235	220	242
31	233	---	249	331	---	309	---	238	---	231	220	---
TOTAL	7425	6954	7785	8430	8936	10198	11900	9691	8543	7648	7182	7116
MEAN	240	232	251	272	308	329	397	313	285	247	232	237
MAX	285	255	284	334	362	429	466	436	445	279	260	260
MIN	227	136	202	239	261	256	303	238	235	222	220	220
AC-FT	14730	13790	15440	16720	17720	20230	23600	19220	16950	15170	14250	14110

CAL YR 1983	TOTAL	99610	MEAN	273	MAX	792	MIN	136	AC-FT	197600
WTR YR 1984	TOTAL	101808	MEAN	278	MAX	466	MIN	136	AC-FT	201900

06787500 CALAMUS RIVER NEAR BURWELL, NE

LOCATION.--Lat 41°48'35", long 99°10'56", in NW1/4NW1/4 sec.9, T.21 N., R.16 W., Garfield County, Hydrologic Unit 10210008, on left bank 210 ft downstream from highway bridge, 1.5 mi upstream from mouth, and 3 mi northwest of Burwell.

DRAINAGE AREA.--1,060 mi², approximately, of which about 110 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1918: 1958. WDR NE-72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,156.48 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 20, 1945, nonrecording gage at site 210 ft upstream at present datum. Apr. 21, 1945, to Jan. 28, 1964, water-stage recorder at site 210 ft downstream at present datum. Jan. 29, 1964, to Oct. 4, 1977, water-stage recorder at site 40 ft downstream at present datum.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation above station.

AVERAGE DISCHARGE.--44 years, 304 ft³/s, 220,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft³/s May 4, 1964, gage height, 4.35 ft; maximum gage height, 5.90 ft Jan. 26, 1967, backwater from ice; minimum daily discharge, 54 ft³/s Dec. 5, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,410 ft³/s Aug. 22, gage height, 4.78 ft, caused by failure of temporary dam 1.2 mi upstream; maximum gage height, 5.64 ft Dec. 14, backwater from ice; minimum daily discharge, 105 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	320	343	320	310	464	414	389	574	355	347	308	263
2	320	345	380	320	455	435	392	639	361	373	328	271
3	320	361	380	340	431	439	411	662	351	380	289	275
4	321	362	390	370	430	414	411	658	383	357	291	274
5	316	357	390	400	357	396	479	528	368	351	299	277
6	326	355	390	430	348	398	546	556	353	351	293	279
7	336	351	380	430	368	392	612	558	347	350	293	274
8	321	342	380	420	390	343	632	514	344	351	299	293
9	321	341	375	400	403	345	583	479	338	254	288	295
10	330	341	380	380	422	350	565	450	331	334	288	304
11	341	341	400	370	432	362	538	417	337	358	288	316
12	336	341	400	360	432	362	495	406	348	364	288	328
13	321	349	390	340	435	374	463	387	347	355	283	310
14	321	362	350	350	453	413	463	373	347	349	283	311
15	326	362	320	350	475	453	487	373	337	342	272	321
16	316	362	330	350	500	519	463	366	384	337	272	323
17	316	355	350	350	513	552	411	355	469	335	278	315
18	325	346	370	350	527	491	384	357	577	333	278	313
19	359	351	330	360	451	424	351	350	532	328	272	315
20	367	350	320	370	388	409	327	341	583	355	293	306
21	359	346	320	380	402	455	471	342	614	335	327	309
22	346	347	305	360	404	484	583	339	588	316	539	302
23	339	337	300	370	413	528	612	342	454	300	340	293
24	333	336	290	380	422	541	612	350	394	307	291	292
25	322	348	290	390	435	507	583	397	358	332	269	299
26	329	357	285	400	442	486	504	386	350	356	261	310
27	336	340	280	390	433	484	448	400	346	365	254	316
28	330	300	285	400	417	435	418	408	334	353	255	302
29	326	250	285	443	408	415	463	398	339	333	255	140
30	326	240	290	449	---	396	520	384	346	313	251	105
31	330	---	300	449	---	396	---	364	---	302	256	---
TOTAL	10235	10218	10555	11761	12450	13412	14616	13453	11915	10516	9081	8631
MEAN	330	341	340	379	429	433	487	434	397	339	293	288
MAX	367	362	400	449	527	552	632	662	614	380	539	328
MIN	316	240	280	310	348	343	327	339	331	254	251	105
AC-FT	20300	20270	20940	23330	24690	26600	28990	26680	23630	20860	18010	17120

CAL YR 1983	TOTAL	136234	MEAN	373	MAX	812	MIN	240	AC-FT	270200
WTR YR 1984	TOTAL	136843	MEAN	374	MAX	662	MIN	105	AC-FT	271400

06788500 NORTH LOUP RIVER AT ORD, NE

LOCATION.--Lat 41°36'27", long 98°55'17", in SW1/4NW1/4 sec.22, T.19 N., R.14 W., Valley County, Hydrologic Unit 10210007, on right bank 150 ft downstream from bridge on State Highway 70 at Ord.

DRAINAGE AREA.--3,750 mi^2, approximately, of which about 700 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--November 1936 to September 1938 (published as "near Ord"), June 1952 to current year.

REVISED RECORDS.--WSP 1730: 1957(M). WDR NE-74: Drainage area. WDR NE-75: 1974.

GAGE.--Water-stage recorder. Datum of gage is 2,012.14 ft National Geodetic Vertical Datum of 1929. Nov. 25, 1936, to Sept. 30, 1938, nonrecording gage at site 2 mi downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions above station for irrigation. Flow includes return water from North Loup irrigation project.

AVERAGE DISCHARGE.--33 years (1937-38, 1952-84), 879 ft^3/s, 636,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft^3/s June 7, 1962, gage height, 5.52 ft; maximum gage height, 6.56 ft Jan. 16, 1981, ice jam; minimum daily discharge, 100 ft^3/s Jan. 3, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,420 ft^3/s Apr. 21, gage height, 3.76 ft; maximum gage height, 4.77 ft Feb. 1, backwater from ice; minimum daily discharge, 565 ft^3/s July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	956	900	860	1700	1220	1270	1710	998	871	669	599
2	1000	999	840	800	1650	1310	1330	1770	1070	885	755	642
3	1020	1060	800	900	1550	1380	1350	1750	1040	867	801	673
4	1070	1040	1040	1060	1450	1350	1400	1830	1060	868	828	685
5	1000	999	1160	1250	1350	1310	1490	1840	1080	911	856	673
6	988	977	1020	1200	1200	1320	1560	2040	1040	954	796	692
7	966	977	1160	1300	1100	1240	1720	1860	1020	909	748	700
8	945	977	1300	1250	1500	1030	1790	1650	1010	861	731	718
9	945	977	1200	1100	2000	1060	1810	1540	1000	829	723	758
10	956	924	1250	960	2200	1120	1790	1440	1020	751	725	785
11	977	903	1140	1100	2000	1100	1860	1360	1030	810	700	830
12	966	903	1040	1000	1900	1240	1830	1420	1150	799	682	917
13	945	924	1140	920	1450	1170	1860	1390	1060	883	668	893
14	956	956	1000	1060	1300	1280	1790	1350	1040	768	623	868
15	999	977	940	1100	1210	1330	1790	1210	1030	699	568	905
16	1010	956	820	1000	1240	1320	1690	1250	1150	678	591	865
17	1020	941	700	1100	1180	1270	1610	1230	1280	649	570	885
18	1020	994	600	1350	1300	1240	1510	1220	1490	617	600	885
19	1050	1020	588	1300	1130	1230	1490	1160	1510	656	657	856
20	1110	1020	580	900	1150	1300	1440	1130	1380	682	702	849
21	1080	941	580	700	1200	1430	1990	1130	1430	721	1020	831
22	1040	918	600	800	1140	1450	1890	1120	1420	666	988	865
23	1030	897	700	900	1150	1420	1850	1110	1480	600	1070	856
24	1030	906	780	980	1150	1470	1800	1050	1260	565	844	872
25	988	874	900	1060	1200	1460	1740	1120	1100	613	820	921
26	977	912	840	1250	1250	1410	1760	1080	1000	682	832	905
27	977	800	800	1300	1220	1380	1680	1060	1010	687	806	919
28	966	700	750	1350	1230	1320	1540	1110	947	718	712	985
29	977	760	780	1400	1150	1300	1610	1110	911	692	663	923
30	977	820	780	1300	---	1290	1720	1040	894	656	613	686
31	956	---	820	1350	---	1270	---	983	---	642	595	---
TOTAL	30961	28008	27548	33900	40250	40020	49960	42063	33910	23189	22956	24441
MEAN	999	934	889	1094	1388	1291	1665	1357	1130	748	741	815
MAX	1110	1060	1300	1400	2200	1470	1990	2040	1510	954	1070	985
MIN	945	700	580	700	1100	1030	1270	983	894	565	568	599
AC-FT	61410	55550	54640	67240	79840	79380	99100	83430	67260	46000	45530	48480

CAL YR 1983 TOTAL 395353 MEAN 1083 MAX 3860 MIN 580 AC-FT 784200
WTR YR 1984 TOTAL 397206 MEAN 1085 MAX 2200 MIN 565 AC-FT 787900

06788988 MIRA CREEK NEAR NORTH LOUP, NE

LOCATION.--Lat 41°30'09", long 98°47'47", in NW1/4SE1/4 sec.27, T.18 N., R.13 W., Valley County, Hydrologic Unit 10210007, on left bank near county road 1.4 mi northwest of North Loup.

PERIOD OF RECORD.--October 1979 to current year.

REVISED RECORDS.--WDR NE-83-1: 1982(M).

GAGE.--Water-stage recorder. Datum of gage is 1,964.41 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--5 years, 2.60 ft³/s, 1,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,460 ft³/s Aug. 5, 1981, gage height, 10.56 ft, from floodmark, from rating curve extended above 200 ft³/s on basis of indirect measurement of peak flow; no flow at times in 1980-81.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 330 ft³/s June 23, gage height, 4.18 ft; minimum daily, 0.02 ft³/s Sept. 14-16, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.27	.27	.47	2.5	1.7	2.8	9.8	1.2	5.1	1.2	.10
2	.10	.27	.29	.48	2.3	2.1	3.0	6.2	.86	5.0	.85	.09
3	.13	.31	.27	.55	1.5	1.8	4.8	5.2	.73	5.1	.39	.07
4	.18	.23	.32	.63	1.7	2.3	5.7	28	.78	5.0	.29	.06
5	.19	.17	.38	.73	1.9	1.7	8.5	8.4	.74	4.9	1.0	.04
6	.15	.13	.40	.83	1.9	1.5	7.1	15	.73	4.5	3.3	.04
7	.13	.13	.37	.91	2.0	1.4	2.3	15	.66	4.1	2.1	.04
8	.11	.10	.42	.96	2.3	1.1	7.1	6.4	.52	3.7	.77	.06
9	.10	.18	.48	.92	2.5	1.1	4.8	6.3	.50	3.1	1.2	.07
10	.10	.22	.48	.85	3.0	1.3	4.8	5.6	.38	2.7	.80	.06
11	.11	.18	.50	.80	2.7	1.3	4.4	5.6	.61	2.7	.57	.05
12	.11	.17	.48	.75	2.6	1.2	4.8	5.5	8.4	2.2	.51	.07
13	.11	.18	.49	.67	2.3	1.7	3.6	5.4	5.8	1.9	.64	.07
14	.11	.18	.46	.62	2.7	3.6	3.3	4.4	5.7	2.9	.81	.02
15	.14	.16	.44	.67	3.0	4.4	3.0	4.6	4.9	3.5	.80	.02
16	.14	.28	.42	.73	2.9	2.3	2.5	4.8	11	3.6	.73	.02
17	.17	.22	.36	.64	2.2	2.3	2.5	4.7	14	2.8	.45	.03
18	.17	.14	.40	.59	.75	2.3	1.7	5.5	23	2.3	.26	.02
19	.20	.19	.40	.54	.57	1.6	1.3	5.8	8.3	2.6	.13	.03
20	.20	.20	.40	.51	1.3	2.3	1.2	5.1	6.6	3.1	.20	.04
21	.20	.25	.44	.49	1.3	7.1	26	4.4	5.3	2.6	4.8	.12
22	.20	.27	.47	.43	1.6	16	11	3.0	4.7	2.5	2.2	.12
23	.20	.18	.47	.42	1.8	7.5	7.9	2.9	118	2.0	.44	.08
24	.19	.20	.44	.41	2.4	4.8	7.1	2.7	15	2.0	.16	.10
25	.16	.20	.40	.49	2.5	4.4	6.6	2.6	8.5	3.6	.10	.20
26	.15	.22	.42	.66	2.1	4.8	7.5	2.4	5.7	2.8	.08	.25
27	.15	.24	.41	.87	1.6	4.2	6.6	1.4	5.0	2.1	.09	.30
28	.16	.26	.42	2.6	1.4	3.3	5.5	1.4	4.8	1.5	.08	.40
29	.19	.24	.42	7.2	1.3	2.5	4.9	1.6	4.7	1.3	.06	.45
30	.24	.25	.42	5.9	---	2.3	8.9	1.4	5.1	.93	.06	.45
31	.27	---	.43	3.2	---	2.8	---	1.4	---	.92	.06	---
TOTAL	4.87	6.22	12.77	36.52	58.62	98.7	171.2	182.5	272.21	93.05	25.13	3.47
MEAN	.16	.21	.41	1.18	2.02	3.18	5.71	5.89	9.07	3.00	.81	.12
MAX	.27	.31	.50	7.2	3.0	16	26	28	118	5.1	4.8	.45
MIN	.10	.10	.27	.41	.57	1.1	1.2	1.4	.38	.92	.06	.02
AC-FT	9.7	12	25	72	116	196	340	362	540	185	50	6.9

CAL YR 1983 TOTAL 1109.58 MEAN 3.04 MAX 609 MIN .07 AC-FT 2200
WTR YR 1984 TOTAL 965.26 MEAN 2.64 MAX 118 MIN .02 AC-FT 1910

06790500 NORTH LOUP RIVER NEAR ST. PAUL, NE

LOCATION.--Lat 41°15'48", long 98°26'56", in NW1/4NW1/4NE1/4 sec.22, T.15 N., R.10 W., Howard County, Hydrologic Unit 10210007, on right bank 310 ft downstream from bridge on U.S. Highway 281, 3 mi north of St. Paul, and 4 mi upstream from confluence with Middle Loup River.

DRAINAGE AREA.--4,290 mi^2, approximately, of which about 1,240 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to September 1915, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 976: 1942. WSP 1390: 1896. WDR NE-74: Drainage area. WDR NE-75: 1974.

GAGE.--Water-stage recorder. Datum of gage is 1,759.29 ft, adjusted, National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Oct. 1, 1954.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by diversions and ground-water withdrawals for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--77 years, 973 ft^3/s, 704,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft^3/s, estimated, June 6, 1896, gage height, 14.9 ft, from floodmark, datum then in use; minimum daily since 1931, 85 ft^3/s Aug. 8, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,660 ft^3/s Apr. 21, gage height, 4.63 ft; maximum gage height, 6.16 ft Jan. 3, backwater from ice; minimum daily discharge, 290 ft^3/s Nov. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	1010	760	1000	1850	1290	1260	1650	970	991	615	521
2	971	1060	980	960	1750	1370	1430	1800	976	971	602	525
3	1020	1110	1160	1030	1700	1370	1560	1800	1020	986	643	542
4	1060	1080	1250	1250	1550	1490	1440	2190	1020	993	666	610
5	1050	1030	1350	1400	1400	1270	1590	2150	1070	1010	701	643
6	1000	990	1250	1350	1350	1220	1660	2430	1060	988	763	645
7	956	994	1320	1500	1250	1210	2120	2180	1040	1000	757	709
8	941	1080	1300	1400	1450	1120	2210	1580	1080	944	695	768
9	986	1180	1250	1250	1600	1100	2090	1340	1130	781	621	796
10	1230	978	1250	1100	1900	1040	2240	1240	1090	732	595	800
11	1050	929	1250	1300	2500	1100	2180	1340	1160	620	597	805
12	1020	991	1200	1200	2300	1140	2270	1300	2250	643	586	877
13	1020	928	1200	1160	2000	1200	2020	1400	1760	611	562	920
14	927	1010	1200	1200	1700	1200	1940	1290	1140	712	508	869
15	971	1010	1150	1300	1500	1350	1930	1230	1020	650	482	891
16	1030	940	1050	1180	1500	1260	1820	1130	1330	584	446	932
17	1050	939	900	1300	1400	1360	1690	1180	1370	547	443	976
18	1080	976	750	1450	1700	1190	1710	1290	1800	518	482	963
19	1130	1200	700	1500	1800	1130	1620	1220	1700	471	521	935
20	1210	1070	650	1100	1600	1070	1570	1140	1490	531	572	897
21	1180	1080	650	800	1600	1240	2240	1070	1360	555	866	852
22	1090	1040	640	900	1800	1320	2760	1090	1450	587	1210	844
23	1020	995	640	960	1650	1330	1970	1060	1690	535	1240	856
24	1000	925	660	1060	1590	1440	1800	1070	1920	477	1230	886
25	999	821	750	1200	1340	1470	1760	1160	1410	452	998	923
26	994	864	840	1300	1320	1530	1800	1150	1180	523	835	954
27	980	332	880	1400	1190	1590	1700	1120	1050	609	800	941
28	972	331	850	1500	1240	1510	1490	1100	1050	609	776	943
29	967	290	840	1550	1250	1340	1560	1110	1030	611	665	1020
30	965	530	860	1400	---	1180	1700	1090	1000	603	620	899
31	990	---	900	1700	---	1250	---	1040	---	557	564	---
TOTAL	31859	27713	30430	38700	46780	39680	55130	42940	38616	21401	21661	24742
MEAN	1028	924	982	1248	1613	1280	1838	1385	1287	690	699	825
MAX	1230	1200	1350	1700	2500	1590	2760	2430	2250	1010	1240	1020
MIN	927	290	640	800	1190	1040	1260	1040	970	452	443	521
AC-FT	63190	54970	60360	76760	92790	78710	109400	85170	76590	42450	42960	49080

CAL YR 1983 TOTAL 422234 MEAN 1157 MAX 5260 MIN 290 AC-FT 837500
WTR YR 1984 TOTAL 419652 MEAN 1147 MAX 2760 MIN 290 AC-FT 832400

06790500 NORTH LOUP RIVER NEAR ST. PAUL, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-53, 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1974 to September 1978.
WATER TEMPERATURES: July 1974 to September 1978.
SUSPENDED SEDIMENT DISCHARGE: April 1946 to June 1953.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 426 micromhos Jan. 18, 1976; minimum daily, 138 micromhos Oct. 21, 1977.
WATER TEMPERATURES: Maximum, 34.0°C July 17, 1978; minimum, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily, 17,400 mg/L Apr. 27, 1951; minimum daily, not determined.
SEDIMENT LOADS: Maximum daily, 463,000 tons June 22, 1947; minimum daily, 20 tons Aug. 3, 1946, Feb. 22, 1953.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)
OCT 25...	1010	960	225	8.4	8.0	10.6
NOV 21...	1045	1100	235	8.1	3.5	11.4
DEC 27...	1025	878	274	7.4	.5	9.1
JAN 16...	1050	1190	251	7.5	.5	11.1
FEB 24...	1050	1500	258	8.0	1.0	12.1
MAR 13...	1050	1270	242	7.9	1.0	12.8
APR 16...	1040	1820	258	8.0	11.0	10.3
MAY 14...	1115	1240	259	8.5	19.0	10.1
JUN 11...	0950	1130	227	8.2	18.5	8.4
JUL 09...	0930	794	239	8.6	25.0	8.1
AUG 02...	1015	601	245	8.6	26.0	11.6
SEP 04...	0940	597	259	8.6	19.5	10.4

DATE	TIME	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
FEB 24...	1050	70	100	0	32	6.0	8.3	.4	7.6	118	12
JUL 09...	0930	70	110	0	34	5.3	8.3	.4	6.5	113	8.5

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB 24...	2.6	.30	47	190	.25	756	.87	.130	20	62	9
JUL 09...	2.0	.40	50	180	.25	392	<.10	.020	30	23	4

06791500 CEDAR RIVER NEAR SPALDING, NE

LOCATION.--Lat 41°42'41", long 98°26'48", in NE1/4NE1/4NE1/4 sec.15, T.20 N., R.10 W., Greeley County, Hydrologic Unit 10210010, on left bank 15 ft downstream from bridge on county road, 0.4 mi upstream from small tributary, and 4.7 mi northwest of Spalding.

DRAINAGE AREA.--762 sq mi, approximately, of which about 50 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--October 1944 to September 1953, October 1957 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-73: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,896.24 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 4, 1961, at two sites 6.5 mi upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--36 years, 158 ft^3/s, 114,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft^3/s June 23, 1947, gage height, 7.50 ft, site and datum then in use, from rating curve extended above 640 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 30 ft^3/s Jan. 30, 1946.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 29	1800	430	*a5.22	May 4	0800	*788	4.80
Mar. 26	2400	598	4.51	June 19	1030	373	3.95
Apr. 8	2100	724	4.72	June 23	1530	571	4.45
Apr. 26	0400	688	4.66				

a Backwater from ice.

Minimum daily discharge, 88 ft^3/s Nov. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	163	160	165	262	259	356	297	170	168	156	145
2	144	191	180	170	242	241	314	309	162	162	156	143
3	147	180	185	180	237	250	344	387	148	186	157	144
4	153	177	180	190	233	276	326	725	165	194	160	144
5	152	171	180	210	243	272	318	654	170	183	158	145
6	149	168	180	220	250	256	327	596	177	168	151	145
7	147	163	180	230	260	229	364	545	183	162	144	148
8	147	159	190	230	260	190	577	533	166	160	147	148
9	145	163	180	210	242	176	637	603	159	159	145	150
10	150	165	180	195	230	225	539	592	156	161	140	155
11	157	162	185	200	231	236	511	514	169	181	140	150
12	154	164	180	170	231	214	474	395	196	174	143	168
13	148	171	180	140	236	214	419	263	208	154	137	161
14	150	171	170	150	236	231	372	233	183	147	126	150
15	171	167	160	160	239	256	447	211	164	150	131	161
16	171	159	155	155	253	275	484	214	178	151	135	157
17	161	159	150	150	268	315	454	205	212	147	134	148
18	159	160	145	150	292	347	417	213	235	144	134	147
19	176	185	145	145	222	340	349	212	327	142	136	149
20	181	186	140	140	188	338	270	203	301	143	141	149
21	175	173	140	150	300	351	341	195	311	145	242	148
22	168	165	150	155	222	366	386	187	434	141	257	147
23	163	162	145	160	212	358	389	175	520	134	192	150
24	161	160	140	170	213	388	393	171	476	128	176	148
25	156	160	140	180	217	448	591	202	373	130	168	147
26	152	160	145	230	234	540	628	207	285	154	168	149
27	155	130	150	300	245	520	492	202	224	165	170	150
28	153	110	150	360	257	448	340	197	219	158	165	151
29	150	130	150	420	262	404	256	195	180	152	157	150
30	154	140	155	420	---	392	285	188	179	152	148	150
31	158	---	160	340	---	393	---	181	---	152	145	---
TOTAL	4850	4874	5030	6445	7017	9748	12400	10004	7030	4847	4859	4497
MEAN	156	162	162	208	242	314	413	323	234	156	157	150
MAX	181	191	190	420	300	540	637	725	520	194	257	168
MIN	143	110	140	140	188	176	256	171	148	128	126	143
AC-FT	9620	9670	9980	12780	13920	19340	24600	19840	13940	9610	9640	8920

CAL YR 1983 TOTAL 78577 MEAN 215 MAX 990 MIN 110 AC-FT 155900
WTR YR 1984 TOTAL 81601 MEAN 223 MAX 725 MIN 110 AC-FT 161900

06792000 CEDAR RIVER NEAR FULLERTON, NE

LOCATION.--Lat 41°23'45", long 98°00'15", in SE1/4SE1/4 sec.33, T.17 N., R.6 W., Nance County, Hydrologic Unit 10210010, on left bank upstream from highway bridge, 3 mi northwest of Fullerton and 7.2 mi, upstream from mouth.

DRAINAGE AREA.--1,220 mi^2, approximately, of which about 480 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1931 to June 1932, October 1940 to current year.

REVISED RECORDS.--WSP 1086: Drainage area. WSP 1390: 1932, 1941, 1943. WSP 1710: 1951(P), 1952(M), 1953, 1955(M).

GAGE.--Water-stage recorder. Datum of gage is 1,638.39 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 5, 1942, nonrecording gage, Nov. 5, 1942, to June 23, 1947, water-stage recorder, June 24, 1947, to Apr. 6, 1948, nonrecording gage, Apr. 7, 1948, to Apr. 15, 1971, water-stage recorder, all on downstream side of bridge pier at datum 2.00 ft higher, and Apr. 16, 1971, to Aug. 26, 1980, on downstream side of bridge pier at present datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by power developments, ground-water and surface-water withdrawals for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--44 years (1940-84), 244 ft^3/s, 176,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,700 ft^3/s Aug. 13, 1966, gage height, 16.90 ft, present datum, from high point on surge, from rating curve extended above 6,600 ft^3/s on basis of flow-over-highway-embankment and contracted-opening measurement of peak flow; minimum daily, 30 ft^3/s July 18, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 12	0500	*3590	6.85
June 13	0300	2230	5.30

Minimum daily discharge, 104 ft^3/s Aug. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	219	190	300	640	380	655	546	302	258	172	188
2	190	217	220	310	600	380	674	508	298	236	175	172
3	216	238	250	330	500	390	866	479	268	266	162	180
4	196	232	255	350	450	400	713	586	228	288	170	185
5	194	239	250	360	410	380	587	843	251	306	169	183
6	197	240	260	370	370	360	491	929	286	628	165	186
7	192	229	255	370	390	330	580	1150	312	415	156	186
8	188	236	260	370	400	320	611	782	291	313	168	190
9	188	238	260	340	410	300	816	688	278	269	147	193
10	202	241	260	320	400	300	844	678	263	255	134	202
11	190	240	260	280	400	394	855	666	283	263	131	209
12	187	239	270	260	390	450	950	628	1650	264	132	214
13	192	238	280	240	380	415	768	594	1220	267	130	214
14	194	234	280	230	370	410	676	422	427	259	125	218
15	198	230	280	230	370	454	620	375	372	240	108	238
16	214	223	250	235	370	468	619	385	499	231	121	220
17	215	222	240	250	360	481	619	342	380	224	104	220
18	245	219	230	260	350	495	594	575	530	212	115	223
19	232	253	230	260	340	539	540	523	392	204	126	223
20	245	252	220	250	320	534	444	441	387	192	127	228
21	225	252	215	245	360	569	602	423	411	202	226	223
22	238	225	210	250	400	635	816	458	384	188	302	221
23	233	235	210	260	380	632	609	390	539	177	271	217
24	240	227	215	270	350	580	549	305	606	171	263	210
25	226	231	220	300	360	592	520	395	575	151	229	208
26	230	242	230	350	370	644	641	392	511	166	216	206
27	208	157	240	400	380	737	648	356	418	176	209	208
28	210	140	240	450	370	757	565	357	354	181	201	208
29	211	160	240	600	370	733	498	338	318	199	201	212
30	221	170	270	640	---	691	550	328	282	194	198	214
31	216	---	280	680	---	674	---	313	---	170	186	---
TOTAL	6526	6718	7570	10360	11560	15424	19520	16195	13315	7565	5339	6199
MEAN	211	224	244	334	399	498	651	522	444	244	172	207
MAX	245	253	280	680	640	757	950	1150	1650	628	302	238
MIN	187	140	190	230	320	300	444	305	228	151	104	172

CAL YR 1983	TOTAL	116539	MEAN	319	MAX	1200	MIN	102
WTR YR 1984	TOTAL	126291	MEAN	345	MAX	1650	MIN	104

06792000 CEDAR RIVER NEAR FULLERTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-59, 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1974 to September 1983.
WATER TEMPERATURES: July 1974 to September 1983.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 550 micromhos Jan. 1, 1978; minimum daily, 119 micromhos Nov. 23, 1980.
WATER TEMPERATURES: Maximum, 36.0°C July 7, 1975; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
OCT									
19...	1100	152	269	8.6	12.0	35	110	0	35
NOV									
16...	0950	222	262	8.1	3.0	15	120	0	38
DEC									
15...	1340	279	320	7.6	.0	5	140	0	43
JAN									
11...	1110	254	310	7.6	.0	<1	130	0	40
FEB									
03...	1545	348	278	7.5	.5	60	120	0	38
MAR									
06...	1015	318	305	8.2	.0	70	130	0	41
APR									
04...	1020	732	328	7.8	4.5	140	130	0	39
MAY									
24...	1020	326	360	7.9	19.0	60	160	0	48
JUN									
21...	1115	349	280	8.0	24.0	230	120	0	38
JUL									
19...	1340	206	--	5.3	28.0	70	150	0	47
AUG									
15...	1530	96	298	7.8	31.0	100	130	0	43
SEP									
11...	1155	209	290	7.5	21.0	40	130	0	40

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)
OCT									
19...	5.9	7.6	.3	7.1	122	9.8	1.9	.20	39
NOV									
16...	6.4	7.8	.3	6.3	137	9.4	2.0	.20	44
DEC									
15...	7.1	8.7	.3	6.3	146	11	2.2	.30	46
JAN									
11...	7.0	8.4	.3	6.9	140	10	2.3	.20	41
FEB									
03...	6.6	8.5	.3	7.0	137	13	2.3	.20	37
MAR									
08...	7.3	10	.5	7.7	144	14	3.0	.30	37
APR									
04...	8.0	11	.4	5.4	145	16	3.6	.30	23
MAY									
24...	8.7	11	.4	7.9	168	15	3.1	.20	36
JUN									
21...	6.0	8.7	.3	6.5	126	12	2.1	.30	35
JUL									
19...	7.3	9.9	.3	6.8	143	13	2.2	.30	41
AUG									
15...	6.7	8.4	.3	7.0	143	11	2.2	.30	40
SEP									
11...	6.4	7.7	.3	7.0	131	9.5	1.7	.30	42

06792000 CEDAR RIVER NEAR FULLERTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	BORON, DISSOLVED (UG/L AS B) (01020)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
OCT									
19...	180	.24	74	.52	.620	.130	20	16	6
NOV									
16...	200	.27	118	.61	.230	.230	20	23	12
DEC									
15...	210	.29	160	.69	.190	.180	20	37	19
JAN									
11...	200	.27	155	.67	.220	.180	20	30	25
FEB									
08...	190	.26	209	.57	.250	.170	20	96	28
MAR									
08...	210	.29	181	<.10	.320	.170	20	120	18
APR									
04...	200	.27	395	.63	.470	.220	20	200	57
MAY									
24...	230	.31	204	.14	.290	.270	30	14	8
JUN									
21...	180	.25	198	<.10	.870	.230	30	38	7
JUL									
19...	220	.29	120	<.10	.450	.200	30	14	13
AUG									
15...	200	.28	53	<.10	.400	.160	30	11	3
SEP									
11...	190	.26	109	.38	--	.190	20	13	10

06792499 LOUP RIVER POWER CANAL AT DIVERSION NEAR GENOA, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°23'31", long 97°49'20", in NE1/4NW1/4 sec.6, T.16 N., R.4 W., Nance County, Hydrologic Unit 10210009, at diversion structure, 2 mi upstream from gaging station and 5.5 mi southwest of Genoa.

PERIOD OF RECORD.--Water year 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1972 to September 1981.
WATER TEMPERATURES: October 1972 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 479 micromhos June 1, 1977; minimum daily, 178 micromhos Aug. 16, 1980.
WATER TEMPERATURES: Maximum, 36.5°C July 11, 13, 14, 1980; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)
NOV 16...	1045	2670	258	7.9	3.5	730	25	14.8	K54	510	110
JAN 11...	1400	1610	290	7.7	.0	739	11	15.4	K230	4400	110
MAR 22...	0950	1780	305	7.8	3.5	729	75	15.5	830	K82000	120
JUN 21...	1145	746	305	8.1	27.0	737	140	9.5	K710	K710	130
JUL 18...	1430	1190	348	8.5	27.5	728	36	10.6	220	K83	160
SEP 12...	1020	1220	303	7.9	20.0	726	25	11.0	K66	K28	130

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)
NOV 16...	0	36	5.9	8.4	.4	5.9	123	11	2.4	.30	50
JAN 11...	0	34	6.1	8.6	.4	7.1	129	12	2.9	.30	46
MAR 22...	0	38	6.8	9.6	.4	7.5	142	15	3.6	.30	37
JUN 21...	0	42	6.7	10	.4	9.7	138	16	3.4	.40	40
JUL 18...	0	50	8.2	12	.4	8.4	155	17	4.0	.30	45
SEP 12...	0	42	6.9	9.5	.4	9.0	142	12	2.6	.30	44

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671)
NOV 16...	185	190	.25	1330	.86	.090	1.4	.270	.170	.160
JAN 11...	204	200	.28	887	.82	.090	.80	.190	.160	.190
MAR 22...	202	200	.27	971	.75	.100	1.2	.560	.220	.150
JUN 21...	204	210	.28	411	.34	.060	.50	.510	.220	.180
JUL 18...	241	240	.33	774	<.10	.040	2.1	.360	.060	.060
SEP 12...	212	210	.29	698	--	--	--	--	--	--

06792499 LOUP RIVER POWER CANAL AT DIVERSION NEAR GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ALUMINUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
NOV											
16...	1045	30	5	120	<.5	<1	1	<3	1	20	2
MAR											
22...	0950	90	5	130	<.5	<1	<1	<3	4	94	1
JUN											
21...	1145	50	7	130	1.0	<1	1	<3	8	23	<1
JUL											
18...	1430	20	9	130	<1.0	<1	<1	<3	3	14	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
NOV										
16...	21	8	.1	<10	<1	1	<1	190	6	8
MAR										
22...	14	44	<.1	<10	<1	<1	<1	200	6	16
JUN										
21...	17	4	<.1	<10	4	<1	<1	200	13	9
JUL										
18...	17	5	.1	<10	5	1	<1	260	12	15

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	TEMPERATURE (DEG C) (00010)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)
NOV								
16...	1045	2670	3.5	142	1020	--	--	--
JAN								
11...	1400	1610	.0	101	439	--	--	--
MAR								
22...	0950	1790	3.5	678	3260	18	20	22
JUN								
21...	1145	746	27.0	279	562	--	--	--
JUL								
18...	1430	1190	27.5	173	556	--	--	--
SEP								
12...	1020	1220	20.0	299	985	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV							
16...	--	89	95	100	--	--	--
JAN							
11...	--	--	--	--	--	--	80
MAR							
22...	23	63	96	100	--	--	--
JUN							
21...	--	91	93	100	--	--	--
JUL							
18...	--	--	--	--	--	--	93
SEP							
12...	--	48	55	99	99	100	--

06792500 LOUP RIVER POWER CANAL NEAR GENOA, NE

LOCATION.--Lat 41°25'03", long 97°47'37", in NE1/4NE1/4 sec.32, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, at skimming weir on downstream end of settling basin on left bank, 2 mi downstream from point of diversion and 3.5 mi southwest of Genoa.

PERIOD OF RECORD.--December 1936 to current year.

GAGE.--Water-stage recorder and concrete weir. Datum of gage is 1,566.26 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1956, at datum 3.0 feet higher.

REMARKS.--Records good. Canal diverts from Loup River in sec.6, T.16 N., R.4 W.; water is used in powerplants near Monroe and Columbus and is returned to Platte River 1.5 mi downstream from Loup River. Diversion began Dec. 2, 1936.

AVERAGE DISCHARGE.--47 years (water years 1938-84), 1,584 ft^3/s, 1,148,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,410 ft^3/s Apr. 27, 1944; no flow Aug. 16, 24-27, 30, 31, 1966, flood damage to canal being repaired.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,800 ft^3/s Nov. 12; minimum daily, 9.2 ft^3/s Nov. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	2530	19	1270	2020	2180	2110	1230	501	336	1140	1010
2	1810	2550	31	1280	2060	2330	2310	1010	611	357	1210	929
3	1870	2570	52	1280	2070	2580	2520	887	662	460	1220	955
4	2050	2640	94	1380	2030	2740	2610	712	692	572	1510	981
5	2020	2680	695	1440	1980	2720	2660	658	663	731	1510	998
6	2110	2660	1480	1460	1930	2650	2570	665	725	605	1470	1070
7	2080	2590	1210	1510	2040	2540	2470	1500	751	601	1400	1040
8	2080	2600	1870	1460	2050	261	2640	799	802	550	1370	1140
9	2140	2670	2020	1460	2040	27	2680	408	809	535	1230	1100
10	2220	2660	1880	1510	2080	19	2620	218	824	496	1130	1190
11	2280	2780	1840	1550	2060	38	2540	200	888	854	1030	1320
12	2310	2800	1510	1580	2050	45	2490	82	1440	827	1010	1350
13	2520	2780	1970	1550	2010	1350	2200	62	1400	795	935	1390
14	2400	2620	1950	1500	1970	2270	1930	88	1260	931	970	1520
15	2260	2490	1870	1500	1810	2240	1740	58	1280	1090	881	1570
16	2340	2660	1830	1480	1320	2150	1620	60	1150	1190	832	1610
17	2330	2600	921	1500	1410	609	1540	66	1340	1230	830	1660
18	2470	2350	161	1470	42	2040	1390	97	1080	1220	832	1690
19	2560	2460	150	1500	104	175	1280	118	976	1190	893	1670
20	2600	2690	150	1510	1050	1240	1250	100	813	1120	897	1640
21	2650	2590	150	1510	1910	2030	1450	81	755	1160	1290	1660
22	2670	2560	150	1530	1880	2180	1350	94	697	1130	1670	1570
23	2660	2350	150	1460	1910	2270	1600	37	635	1130	2050	1590
24	2480	881	150	1510	1880	2060	1380	20	684	1100	2290	1600
25	2560	1140	150	1580	1820	1970	1090	30	541	1030	2060	1640
26	2520	1710	150	1650	1630	1890	1140	135	598	1040	1750	1710
27	2470	17	724	1730	1760	1900	1060	408	426	1090	1590	1880
28	2390	11	1270	1830	1910	1730	1010	442	310	1200	1460	1850
29	2440	9.2	1440	1980	1470	1570	960	432	310	1240	1440	1810
30	2470	14	1220	1990	---	1790	1160	476	330	1260	1240	1910
31	2500	---	1220	2030	---	2090	---	532	---	1210	1110	---
TOTAL	71990	63662.2	28477	47990	50296	51684	55370	11705	23953	28280	40250	43053
MEAN	2322	2122	919	1548	1734	1667	1846	378	798	912	1298	1435
MAX	2670	2800	2020	2030	2080	2740	2680	1500	1440	1260	2290	1910
MIN	1730	9.2	19	1270	42	19	960	20	310	336	830	929
AC-FT	142800	126300	56480	95190	99760	102500	109800	23220	47510	56090	79840	85400

CAL YR 1983 TOTAL 661510.2 MEAN 1812 MAX 2930 MIN 9.2 AC-FT 1312000
WTR YR 1984 TOTAL 516710.2 MEAN 1412 MAX 2800 MIN 9.2 AC-FT 1025000

06793000 LOUP RIVER NEAR GENOA, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°25'05", long 97°43'25", in SW1/4NE1/4 sec.25, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, on right bank 12 ft downstream from bridge on State Highway 39, 2 mi south of Genoa, 3 mi upstream from Beaver Creek, and 6 mi downstream from diversion dam of Loup River Public Power District.

DRAINAGE AREA.--14,400 mi^2, approximately, of which about 5,650 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to June 1932, October 1943 to current year (October 1953 to April 1955, monthly discharge only).

REVISED RECORDS.--WDR NE-74: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,540.13 ft National Geodetic Vertical Datum of 1929, Aug. 17, 1928, to June 30, 1932, nonrecording gage at present site at datum 1.49 ft higher. Oct. 1, 1943, to Sept. 16, 1974, (Apr. 26 to Dec. 22, 1949, wire-weight gage only), at present site and datum. Sept. 17, 1974, to Nov. 21, 1977, at site 300 ft upstream at present datum.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow of stream affected by power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Records do not include flow of Loup River power canal (station 06792500) which diverts at point 6 mi upstream and returns to Platte River below mouth of Loup River; diversion began Dec. 2, 1936.

AVERAGE DISCHARGE.--41 years (water years 1944-84), 642 ft^3/s, 465,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 129,000 ft^3/s Aug. 13, 1966, gage height, 13.93 ft, from rating curve extended above 42,000 ft^3/s on basis of indirect measurement of peak flow; no flow at times during 1956, 1959, 1961, 1963, 1970, 1973, 1974, 1975, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 44,700 ft^3/s June 13, gage height, 10.62 ft; minimum daily, 3.6 ft^3/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	8.6	1100	1000	2550	2330	908	5910	1070	2150	64	40
2	4.7	11	1500	1040	2600	1780	1200	5890	991	2110	66	44
3	10	20	1700	1100	2600	1250	6070	6960	879	1980	68	35
4	9.2	74	1900	1100	2500	2050	5170	7190	932	1950	71	41
5	5.9	152	1300	1180	2400	1870	3090	6700	1020	3630	73	45
6	4.5	91	800	1180	2300	1180	1720	7800	1570	2810	73	49
7	4.0	71	900	1200	2200	923	2730	11000	2140	2540	74	35
8	3.6	61	700	1200	2200	3780	4190	6050	1900	2340	76	25
9	4.0	172	680	1200	2200	2850	3870	4970	2080	1880	89	24
10	6.4	235	800	1200	2200	3230	3240	5170	1860	1660	102	32
11	9.2	170	700	1250	2300	4320	3040	5420	1800	1170	101	18
12	5.2	152	800	1250	2500	5350	5310	5020	24800	903	103	21
13	4.5	127	700	1250	3000	2760	3040	4270	40200	770	142	18
14	4.2	119	800	1250	4000	982	2460	3720	16300	562	92	11
15	4.3	99	860	1240	5400	1060	2060	4120	7240	439	101	12
16	3.7	80	900	1200	6800	1430	1880	4010	4800	300	94	12
17	3.9	62	1000	1250	5000	3950	1650	3670	5890	177	88	12
18	5.6	55	1900	1250	4500	929	1790	5050	4880	107	85	11
19	13	124	2100	1200	3700	3770	2160	6700	3830	86	81	16
20	11	181	2100	1100	3300	1940	1870	5420	3070	78	75	15
21	19	168	2050	1120	3000	730	4820	4420	2910	70	135	14
22	32	160	2150	1140	3000	2070	17300	4320	2850	64	122	11
23	22	155	2200	1160	3100	1680	7320	3900	3130	60	120	12
24	15	723	2200	1200	3300	1300	4380	3200	3680	61	110	12
25	11	774	2200	1300	3500	1790	3710	3120	3660	65	93	12
26	19	331	1600	1400	3900	2450	3530	3140	4810	63	86	13
27	15	793	1000	1600	4400	2820	3690	2900	3360	58	90	14
28	9.8	943	1000	1700	4700	2660	2810	2600	2770	61	92	14
29	8.7	807	920	1900	5010	2830	2850	2240	2390	65	65	15
30	8.7	790	940	2200	---	2130	4480	1930	2280	64	44	15
31	8.6	---	980	2500	---	983	---	1280	---	63	48	---
TOTAL	291.8	7708.6	40480	40860	98160	69177	112338	148090	159092	28336	2723	648
MEAN	9.41	257	1306	1318	3385	2232	3745	4777	5303	914	87.8	21.6
MAX	32	943	2200	2500	6800	5350	17300	11000	40200	3630	142	49
MIN	3.6	8.6	680	1000	2200	730	908	1280	879	58	44	11
AC-FT	579	15290	80290	81050	194700	137200	222800	293700	315600	56200	5400	1290

CAL YR 1983 TOTAL 373402.6 MEAN 1023 MAX 9640 MIN 1.3 AC-FT 740600
WTR YR 1984 TOTAL 707904.4 MEAN 1934 MAX 40200 MIN 3.6 AC-FT 1404000

06793000 LOUP RIVER NEAR GENOA, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976, 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)
MAR											
21...	1640	1850	287	7.8	7.0	725	65	12.2	K75	K110	120
26...	1245	2580	295	8.5	7.0	715	60	12.4	K43	1000	130
APR											
04...	1615	5750	298	8.0	7.5	729	130	12.8	K680	32000	120

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)
MAR											
21...	0	38	6.4	9.8	.4	6.7	138	14	1.3	.30	47
26...	0	39	6.7	11	.4	8.1	137	16	4.1	.30	41
APR											
04...	0	35	6.8	9.3	.4	8.2	127	18	3.6	.30	33

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671)
MAR										
21...	296	210	.40	1480	.86	.030	1.1	.440	.210	.100
26...	261	210	.36	1820	1.0	.080	1.5	.380	.230	.130
APR										
04...	205	190	.28	3180	.76	.100	1.8	.600	.220	.120

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)
MAR											
21...	1640	10	5	120	<.5	<1	<1	<3	5	45	3
26...	1245	70	6	130	<.5	1	<1	<3	10	40	5
APR											
04...	1615	50	5	120	.5	<1	<1	<3	5	41	<1

06793000 LOUP RIVER NEAR GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
MAR										
21...	15	4	<.1	<10	<1	<1	1	200	8	8
26...	17	11	<.1	<10	<1	<1	<1	200	8	32
APR										
04...	15	7	<.1	<10	18	<1	<1	190	<6	7

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	TEMPER-ATURE (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
MAR							
21...	1640	1850	7.0	2290	11400	--	--
26...	1245	2580	7.0	1290	8990	--	--
APR							
04...	1615	5750	7.5	2740	42500	5	6

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)
MAR						
21...	--	--	6	35	92	100
26...	--	--	22	50	95	100
APR						
04...	6	7	18	44	91	100

06793500 BEAVER CREEK AT LORETTO, NE

LOCATION.--Lat 41°45'50", long 98°04'50", in NE1/4SE1/4 sec.26, T.21 N., R.7 W., Boone County, Hydrologic Unit 10210009, on left bank 5 ft downstream from county road bridge, at the west edge of Loretto.

DRAINAGE AREA.--311 mi², of which about 100 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1944 to September 1953, October 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,785.95 ft National Geodetic Vertical Datum of 1929. Prior to May 15, 1945, staff gage at bridge 25 ft upstream, May 15, 1945, to Aug. 16, 1946, water-stage recorder at site 85 ft upstream, Aug. 17, 1946, to Sept. 30, 1953, at site 5 ft downstream, all at present datum.

REMARKS.--Records fair except those for winter period, which are poor. There are diversions for irrigation above station during the summer period.

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--14 years (water years 1945-53, 1980-84), 81.1 ft³/s, 58,760 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,570 ft³/s June 2, 1950, gage height, 11.74 ft; minimum daily, 12 ft³/s July 8, Aug. 8, 9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 5	0100	521	5.71	May 9	1800	590	6.00
May 7	0100	*807	6.79	June 23	0530	710	6.52

Minimum daily discharge, 35 ft³/s Aug. 15, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	48	38	55	120	132	131	351	88	71	50	40
2	42	48	43	60	140	135	118	428	81	67	53	40
3	42	50	44	62	157	144	398	374	81	69	46	40
4	42	66	48	68	151	172	457	386	80	65	45	40
5	42	58	52	76	100	174	423	345	82	68	45	40
6	42	56	53	80	90	153	425	390	119	109	41	38
7	42	54	54	82	102	132	388	519	84	68	38	38
8	42	50	56	85	113	90	405	429	78	61	38	37
9	43	49	60	84	133	85	392	540	85	57	39	40
10	43	52	61	75	139	90	372	474	114	58	36	40
11	43	52	66	73	148	101	359	283	88	58	36	41
12	43	51	67	75	151	96	440	187	112	56	36	42
13	44	52	69	68	150	94	410	147	106	55	36	43
14	44	52	70	65	148	100	335	131	94	52	36	42
15	47	52	68	66	161	188	319	119	85	51	35	43
16	52	51	68	65	188	254	263	119	120	56	36	44
17	49	51	65	65	198	194	164	111	123	51	35	44
18	49	51	58	60	172	153	128	109	129	48	36	43
19	56	54	55	58	92	131	127	124	140	48	36	43
20	61	80	52	56	90	157	105	111	160	48	36	41
21	56	68	50	56	97	144	212	100	184	45	109	40
22	55	61	48	60	112	249	310	93	215	43	68	40
23	53	60	47	62	112	321	260	86	426	43	55	40
24	53	54	46	67	119	332	220	83	237	38	53	42
25	52	60	45	75	131	360	180	103	164	178	51	42
26	52	59	48	78	154	318	250	128	148	208	49	43
27	51	46	49	84	174	289	168	114	115	94	50	45
28	50	43	50	85	179	225	139	125	101	66	48	45
29	49	40	49	92	150	185	129	109	91	56	45	46
30	49	38	50	102	---	166	218	103	80	51	42	46
31	48	---	52	110	---	137	---	97	---	46	41	---
TOTAL	1479	1606	1681	2249	3971	5501	8245	6818	3810	2084	1400	1248
MEAN	47.7	53.5	54.2	72.5	137	177	275	220	127	67.2	45.2	41.6
MAX	61	80	70	110	198	360	457	540	426	208	109	46
MIN	42	38	38	55	90	85	105	83	78	38	35	37
AC-FT	2930	3190	3330	4460	7880	10910	16350	13520	7560	4130	2780	2480

CAL YR 1983 TOTAL 36939 MEAN 101 MAX 701 MIN 31 AC-FT 73270
WTR YR 1984 TOTAL 40092 MEAN 110 MAX 540 MIN 35 AC-FT 79520

06794000 BEAVER CREEK AT GENOA, NE

LOCATION.--Lat 41°26'32", long 97°44'11", in NE1/4SE1/4 sec.14, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, on left bank in city park at southwest corner of Genoa, 0.2 mi downstream from Union Pacific Railroad bridge, 0.2 mi upstream from bridge on State Highway 39, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--647 mi², of which about 410 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1310: 1942(M). WDR NE-73: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,542.13 ft National Geodetic Vertical Datum of 1929. October 1940 to Nov. 5, 1942, nonrecording gage and Nov. 6, 1942, to Nov. 1, 1955, water-stage recorder, at site 0.4 mi upstream at datum 4.62 ft higher.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected slightly by ground-water and surface-water withdrawals for irrigation.

AVERAGE DISCHARGE.--44 years, 126 ft³/s, 91,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s July 19, 1950, gage height, 18.70 ft, site and datum then in use, from rating curve extended above 8,500 ft³/s; minimum daily, 0.41 ft³/s July 25, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 26	1730	1310	9.06	June 13	0545	3230	13.17
May 7	1115	1560	9.91	June 16	1600	1240	8.93
June 12	0700	*4520	14.44	June 18	1500	1260	8.98

Minimum daily discharge, 49 ft³/s Sept. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	76	56	110	180	205	274	686	203	174	76	63
2	66	75	70	114	190	200	282	517	194	163	76	62
3	70	80	82	120	190	190	612	523	182	245	80	55
4	68	82	88	125	190	200	561	589	182	182	72	58
5	66	89	90	130	180	210	547	554	185	209	74	55
6	65	88	90	130	190	200	541	724	200	408	74	55
7	65	85	88	130	200	180	582	1330	180	229	66	49
8	64	84	84	125	200	170	581	664	170	167	63	49
9	64	86	86	120	205	160	560	573	190	144	62	50
10	67	83	90	112	190	140	554	630	200	144	63	53
11	70	84	94	110	200	150	520	554	220	135	56	58
12	70	86	96	106	210	160	600	432	2310	133	53	58
13	68	86	98	100	180	171	660	390	1290	128	53	58
14	66	86	100	110	179	187	700	360	308	123	52	62
15	66	86	90	100	191	191	620	350	242	121	53	67
16	67	86	86	106	207	251	540	340	622	116	62	67
17	73	86	82	100	218	301	462	340	434	116	57	66
18	73	88	80	96	227	269	371	562	755	112	55	66
19	75	94	76	90	200	234	314	350	333	108	58	66
20	77	120	84	88	150	214	283	280	266	107	54	63
21	83	110	80	88	130	210	399	239	250	105	136	60
22	79	103	90	100	150	200	733	300	260	97	207	60
23	77	94	94	110	170	240	578	213	640	91	131	61
24	76	89	100	130	190	350	583	203	420	87	96	63
25	74	90	102	150	200	600	519	212	324	84	113	65
26	73	88	104	140	210	821	952	264	277	156	95	68
27	75	76	104	160	215	679	526	242	248	250	77	70
28	74	72	102	165	210	441	346	271	220	163	76	72
29	73	64	100	170	210	347	323	253	201	113	73	72
30	72	60	98	180	---	314	461	224	186	94	68	74
31	73	---	104	190	---	293	---	211	---	84	62	---
TOTAL	2199	2576	2788	3805	5562	8478	15584	13380	11692	4588	2393	1845
MEAN	70.9	85.9	89.9	123	192	273	519	432	390	148	77.2	61.5
MAX	83	120	104	190	227	821	952	1330	2310	408	207	74
MIN	64	60	56	88	130	140	274	203	170	84	52	49
AC-FT	4360	5110	5530	7550	11030	16820	30910	26540	23190	9100	4750	3660

CAL YR 1983	TOTAL	61693	MEAN	169	MAX	1920	MIN	43	AC-FT	122400
WTR YR 1984	TOTAL	74890	MEAN	205	MAX	2310	MIN	49	AC-FT	148500

06794000 BEAVER CREEK AT GENOA, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
OCT 19...	1605	80	384	8.0	12.0	9.3	29	K90000	K360000	160	49
NOV 16...	1630	86	338	7.9	4.0	13.3	20	320	11000	160	50
DEC 14...	1530	100	370	7.6	.0	10.2	19	1600	5000	170	53
JAN 11...	1615	110	340	7.8	.0	14.0	22	1000	K11000	140	45
FEB 09...	0945	204	314	7.6	.0	12.8	38	830	1000	140	42
MAR 08...	1615	173	355	7.7	.0	15.5	48	260	940	150	45
APR 04...	1500	530	313	7.5	5.5	11.0	160	16000	K140000	120	37
MAY 23...	1510	210	480	8.1	18.5	8.4	<10	1900	3000	210	66
JUN 20...	1210	262	380	7.6	24.0	7.6	120	11000	9600	170	53
JUL 18...	1610	110	400	8.0	28.0	9.5	45	3400	610	210	66
AUG 15...	1045	54	460	8.0	24.0	9.8	50	450	3000	200	63
SEP 11...	1000	55	400	8.0	17.0	9.0	50	700	4400	180	54

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 19...	8.4	17	4.5	126	.90	.120	1.4	1.5	2.4	.340	7.9
NOV 16...	8.4	13	3.3	110	.90	.100	1.3	1.4	2.3	.560	4.7
DEC 14...	8.3	15	3.7	56	.90	.160	.54	.70	1.6	.330	4.3
JAN 11...	7.6	14	3.5	55	.80	.250	.55	.80	1.6	.310	4.8
FEB 09...	7.4	13	3.4	160	.80	.290	1.2	1.5	2.3	.430	12
MAR 08...	8.4	15	4.4	307	.80	.210	1.3	1.5	2.3	.550	7.0
APR 04...	6.8	18	5.3	576	1.4	1.10	11	12	13	2.50	42
MAY 23...	12	20	5.3	120	1.0	.030	1.5	1.5	2.5	.500	12
JUN 20...	9.1	16	4.4	390	1.6	.020	4.5	4.5	6.1	1.30	35
JUL 18...	11	18	4.7	185	.60	.140	1.8	1.9	2.5	.620	10
AUG 15...	11	19	4.7	70	<.10	.060	1.2	1.3	--	.510	10
SEP 11...	11	16	3.5	140	.90	.010	--	--	--	.480	4.7

06794000 BEAVER CREEK AT GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
NOV										
16...	1630	0	9.6	.3	7.0	175	.30	43	240	.33
FEB										
09...	0945	0	9.3	.4	7.9	151	.20	33	210	.28
MAY										
23...	1510	2	12	.4	8.9	213	.30	33	290	.39
AUG										
15...	1045	0	12	.4	9.2	226	.40	35	290	.39

DATE	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
NOV										
16...	56	.92	.300	7	100	30	<1	<10	10	2400
FEB										
09...	114	.79	.170	--	--	20	--	--	--	--
MAY										
23...	162	1.1	.420	8	300	40	1	20	17	6800
AUG										
15...	42	<.10	.270	--	--	40	--	--	--	--

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE) (01044)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN) (01054)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
NOV										
16...	2400	17	2	100	90	14	<.1	1	<1	60
FEB										
09...	--	<3	--	--	--	55	--	--	--	--
MAY										
23...	--	23	6	270	--	11	<.1	1	<1	70
AUG										
15...	--	5	--	--	--	8	--	--	--	--

06795500 SHELL CREEK NEAR COLUMBUS, NE

LOCATION.--Lat 41°31'33", long 97°16'55", in NE1/4NW1/4 sec.23, T.18 N., R.1 E., Platte County, Hydrologic Unit 10200201, on right bank 80 ft upstream from county road bridge, 1 mi upstream from Loseke Creek, and 7 mi northeast of Columbus.

DRAINAGE AREA.--270 mi², approximately.

PERIOD OF RECORD.--August 1947 to September 1975, October 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,435 ft.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--35 years, 43.7 ft³/s, 31,660 acre-ft/yr; median of yearly mean discharges, 35 ft³/s, 25,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,970 ft³/s June 3, 1950, gage height, 21.38 ft; maximum gage height, 22.11 ft May 20, 1982, backwater from log jam; minimum daily discharge, 0.4 ft³/s July 27, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1947, reached a stage of 21.7 ft, from floodmark, discharge, 4,600 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 27	0730	799	8.87	June 13	1900	1480	a13.44
Apr. 3	1500	1130	11.23	June 16	1830	*2280	16.78
Apr. 12	0900	1260	12.08	June 19	1800	1090	a12.00
May 7	1000	1180	a11.23	June 24	2400	1070	11.86
May 19	0300	985	10.22				

a From graph based on partial record and/or observer readings.

Minimum daily discharge, 8.7 ft³/s Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	12	14	20	78	52	95	380	70	47	22	12
2	12	13	16	22	78	54	92	245	68	44	25	12
3	12	14	17	22	76	56	781	217	64	44	24	9.6
4	12	18	17	23	74	56	588	180	62	43	22	9.5
5	11	21	19	24	62	60	223	203	60	42	21	10
6	11	18	18	25	66	64	152	242	56	47	22	10
7	10	15	19	25	60	65	218	933	54	121	19	10
8	10	16	20	25	54	60	504	374	54	62	20	9.4
9	8.9	16	22	24	47	52	242	127	54	40	21	8.7
10	10	18	21	22	45	46	134	93	100	38	19	9.4
11	10	25	19	21	47	48	117	81	311	37	18	9.6
12	12	21	18	19	52	50	835	72	670	38	17	11
13	12	18	20	17	54	46	229	63	1460	35	17	11
14	11	19	20	18	54	42	132	56	661	32	16	11
15	11	18	20	19	56	50	138	50	110	31	16	10
16	10	17	18	19	64	80	97	49	1260	30	16	11
17	11	16	17	18	72	58	73	48	667	29	13	11
18	12	16	16	16	64	45	65	233	650	28	16	11
19	14	19	16	17	62	38	59	635	959	29	15	11
20	15	26	16	14	54	34	55	171	245	28	14	10
21	19	58	16	16	56	38	104	99	109	29	22	10
22	14	45	17	18	58	109	288	712	93	28	66	11
23	13	26	17	21	60	204	200	200	87	26	75	10
24	13	17	18	22	54	211	107	100	704	26	28	10
25	11	16	20	23	56	346	80	110	361	27	18	12
26	10	18	22	25	58	552	96	120	86	46	16	11
27	12	19	22	28	56	700	178	110	64	100	17	12
28	11	19	21	31	52	383	86	120	57	84	15	12
29	11	19	20	34	50	185	75	98	53	36	14	12
30	12	18	19	43	---	120	243	84	50	25	13	13
31	12	---	19	56	---	104	---	76	---	25	12	---
TOTAL	366.9	611	574	727	1719	4008	6286	6281	9299	1297	669	320.2
MEAN	11.8	20.4	18.5	23.5	59.3	129	210	203	310	41.8	21.6	10.7
MAX	19	58	22	56	78	700	835	933	1460	121	75	13
MIN	8.9	12	14	14	45	34	55	48	50	25	12	8.7

CAL YR 1983 TOTAL 19177.3 MEAN 52.5 MAX 1020 MIN 6.6
WTR YR 1984 TOTAL 32158.1 MEAN 87.9 MAX 1460 MIN 8.7

06796000 PLATTE RIVER AT NORTH BEND, NE

LOCATION.--Lat 41°27'10", long 96°45'50", in SE1/4 sec.7, T.17 N., R.6 E., Dodge County, Hydrologic Unit 10200201, on left bank 80 ft upstream from bridge on State Highway 79, 1 mi south of North Bend, and 5 mi downstream from Shell Creek.

DRAINAGE AREA.--77,100 mi², approximately, of which about 63,300 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1949 to current year.

REVISED RECORDS.--WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,262.32 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 12, 1951, nonrecording gage and Sept. 12, 1951, to Sept. 30, 1970, water-stage recorder, at present site at datum 2.00 ft higher.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--35 years, 4,355 ft³/s, 3,155,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 112,000 ft³/s Mar. 29, 1960, gage height, 10.04 ft, present datum; maximum gage height, 15.55 ft Mar. 19, 1978, ice jam; minimum daily discharge, 36 ft³/s July 29, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 65,200 ft³/s June 13, gage height, 9.13 ft; minimum daily, 1,340 ft³/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11300	3950	2000	5600	10000	11200	12500	25000	16500	13700	1920	1560
2	10100	3750	2300	6400	10400	10600	15400	25200	15000	12400	1940	1760
3	10400	4010	2500	7200	10400	11000	25000	26700	13600	11700	2110	1360
4	10700	4280	2800	8000	10000	12600	28900	28400	13000	11500	1950	1680
5	10100	4480	3000	8400	9800	13200	23900	27100	13000	12300	2370	1580
6	9400	4670	3400	8800	10000	12300	21500	27200	13100	15400	2210	2560
7	6140	4620	3700	9000	10400	11300	18300	34500	13800	14900	2200	2790
8	6410	3920	4200	8800	10800	9770	22400	31700	13700	13700	2160	3390
9	4340	5270	4700	8400	11000	9210	21500	25500	12500	12000	2440	3430
10	5110	5050	5000	8200	11000	8000	19100	23300	12800	10600	1690	3890
11	5710	5820	5400	8200	11200	8520	17800	20700	12300	9180	1900	4300
12	5700	4710	5600	8200	11400	9600	23300	18200	25600	7840	1730	5020
13	5080	5440	5600	7800	11600	9920	22100	16200	60500	5970	1850	5410
14	4810	4740	5800	7400	12400	10500	15800	15400	51000	5860	1720	5760
15	4330	4580	5800	7200	17000	10700	15300	14500	31500	4440	1850	6060
16	4900	4740	5600	6800	20000	12200	13500	14200	34500	4850	1450	7080
17	4090	5130	5400	6600	14700	11600	12200	13500	34400	4340	1470	5580
18	4450	4540	4800	6600	13300	13200	11700	16100	27600	4020	1440	5720
19	4890	4850	5000	6400	11300	12100	11100	25500	22500	3070	1380	6360
20	5290	5790	4800	6400	10700	11800	9950	23000	21100	3230	1340	4880
21	5430	6350	4400	6400	10700	12300	12900	23300	19700	2950	1510	5230
22	5480	6370	4200	6200	10300	13300	29900	25100	18200	2350	2180	5070
23	5250	6350	4000	6200	11300	15700	31000	24500	15400	2450	2570	4880
24	4410	5080	3800	6200	12700	14900	24900	21000	15500	2250	2980	5060
25	4870	5380	3800	6200	12600	15400	22000	21200	16500	2660	3220	4820
26	3420	6250	3900	6400	12600	17800	20600	20900	13400	2720	2680	4630
27	5750	4200	3800	6800	12700	18200	22100	19200	14500	1830	2480	4790
28	4300	3500	4000	7400	12300	17400	18300	17500	13700	2330	2310	4900
29	2340	3000	4100	8000	11000	15600	17000	17000	14500	2440	2270	4700
30	3140	2300	4600	8600	---	14000	22100	17000	14600	2170	2040	4370
31	3620	---	5000	9400	---	11900	---	16200	---	1950	1940	---
TOTAL	181260	143120	133000	228200	343600	385820	582050	674800	614000	207100	63300	128620
MEAN	5847	4771	4290	7361	11850	12450	19400	21770	20470	6681	2042	4287
MAX	11300	6370	5800	9400	20000	18200	31000	34500	60500	15400	3220	7080
MIN	2340	2300	2000	5600	9800	8000	9950	13500	12300	1830	1340	1360
AC-FT	359500	283900	263800	452600	681500	765300	1154000	1338000	1218000	410800	125600	255100

CAL YR 1983 TOTAL 3551730 MEAN 9731 MAX 51700 MIN 2000 AC-FT 7045000
WTR YR 1984 TOTAL 3684870 MEAN 10070 MAX 60500 MIN 1340 AC-FT 7309000

06796000 PLATTE RIVER AT NORTH BEND, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1972 to September 1977.
WATER TEMPERATURES: October 1972 to September 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 790 micromhos June 25, 1973; minimum daily, 218 micromhos Sept. 19, 1977.
WATER TEMPERATURE: Maximum, 29.5°C several days during summer periods; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
OCT											
20...	1630	5830	552	8.0	12.0	10.7	22	1100	3200	190	51
NOV											
15...	1200	5010	477	8.2	4.0	13.4	28	5000	2300	170	50
DEC											
14...	1300	5800	800	7.6	.0	12.2	19	300	660	300	80
JAN											
10...	1415	8280	880	7.9	.0	14.2	18	K210	1200	300	82
FEB											
10...	1035	12500	710	7.7	.0	13.8	24	K86	730	240	67
MAR											
07...	1215	11500	790	7.5	1.0	14.8	27	K90	2300	270	70
APR											
03...	1200	22700	638	8.0	4.5	12.2	69	K430	K100000	210	58
MAY											
29...	1100	17600	680	8.0	16.0	9.6	42	1000	740	250	68
JUN											
25...	1045	15400	605	7.8	24.0	7.3	130	--	7200	200	54
JUL											
17...	1550	4430	525	8.0	28.5	10.0	50	730	460	180	49
AUG											
16...	1345	2050	645	8.4	28.0	10.8	160	K70	2600	190	50
SEP											
11...	1400	4930	568	8.3	18.0	7.9	50	--	680	200	55

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
20...	15	110	15	57	.70	.020	1.1	1.1	1.8	.150	5.7
NOV											
15...	12	78	10	91	1.0	.130	1.2	1.3	2.3	.450	4.8
DEC											
14...	24	190	23	32	1.0	.070	.53	.60	1.6	.150	3.7
JAN											
10...	22	220	26	22	1.0	.100	.40	.50	1.5	.090	4.4
FEB											
10...	18	160	21	42	1.3	.110	1.3	1.4	2.7	.190	4.6
MAR											
07...	22	180	21	71	1.5	.090	.71	.80	2.3	.220	7.3
APR											
03...	17	120	15	786	1.2	.180	3.3	3.5	4.7	.770	16
MAY											
29...	19	160	20	168	1.0	.030	.97	1.0	2.0	.060	6.2
JUN											
25...	15	120	15	1620	.50	.090	5.4	5.5	6.0	.220	40
JUL											
17...	14	87	13	188	<.10	.060	1.7	1.8	--	.320	11
AUG											
16...	16	140	20	99	<.10	.040	2.0	2.0	--	.320	16
SEP											
11...	16	100	15	151	<.10	.080	2.7	2.8	--	.320	15

06796000 PLATTE RIVER AT NORTH BEND, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
NOV 15...	1200	17	31	1	7.8	158	.40	41	330	.44
FEB 10...	1035	64	52	2	8.6	178	.50	27	460	.63
MAY 29...	1100	68	50	1	9.3	180	.60	23	460	.62
JUN 25...	1045	--	42	1	--	--	--	--	--	--
AUG 16...	1345	34	51	2	11	157	.50	29	410	.56

DATE	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
NOV 15...	4400	1.0	.170	5	<100	60	<1	20	7	1800
FEB 10...	15600	1.3	.140	--	--	90	--	--	--	--
MAY 29...	21800	.42	.060	5	300	100	<1	<10	10	5100
JUN 25...	--	--	--	--	--	--	--	--	--	--
AUG 16...	2280	<.10	.030	--	--	100	--	--	--	--

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE) (01044)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN) (01054)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
NOV 15...	1800	11	2	100	100	3	<.1	1	1	20
FEB 10...	--	21	--	--	--	5	--	--	--	--
MAY 29...	5100	12	3	320	320	3	<.1	2	<1	40
JUN 25...	--	--	--	--	--	--	--	--	--	--
AUG 16...	--	6	--	--	--	3	--	--	--	--

06796973 ELKHORN RIVER NEAR ATKINSON, NE

LOCATION.--Lat 42°29'12", long 98°54'42", in SW1/4NW1/4 sec.13, T.29 N., R.14 W, Holt County, Hydrologic Unit 10220001, on left bank 10 ft downstream from county road bridge, 4.0 mi southeast of Atkinson.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,042 ft from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Minor diversions for irrigation above station.

COOPERATION.--Discharge record furnished by Nebraska Department of Water Resources.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,500 ft³/s Apr.8, 1984, gage height, 8.41 ft; minimum daily, 5.8 ft³/s Dec. 30, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,500 ft³/s Apr. 8, gage height, 8.41 ft; minimum daily, 9.0 ft³/s Dec. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	26	19	23	41	269	406	771	89	83	45	22
2	24	26	19	27	40	296	373	762	85	79	42	22
3	25	26	19	30	40	354	347	758	78	76	39	21
4	25	26	18	36	38	331	347	630	81	67	39	22
5	24	26	16	36	36	217	705	508	79	68	37	21
6	24	27	15	37	37	212	1600	467	86	63	36	21
7	24	27	15	38	38	209	2060	447	97	58	35	21
8	23	26	16	36	43	140	2290	384	122	57	34	21
9	23	29	17	35	46	135	1890	325	123	58	33	22
10	24	28	18	34	47	141	1400	276	116	64	31	21
11	24	28	18	34	51	146	1180	259	108	62	30	22
12	22	30	18	33	53	143	1370	248	121	60	28	23
13	23	33	17	31	54	148	1430	226	122	55	27	22
14	24	34	16	30	59	178	1530	200	122	52	26	22
15	24	32	14	31	62	417	1250	177	115	50	25	22
16	24	32	13	30	64	643	965	159	137	48	26	22
17	24	32	12	30	66	599	721	140	149	47	26	24
18	25	32	10	28	66	743	605	127	194	43	25	24
19	26	34	10	27	67	650	492	122	189	42	25	24
20	26	32	10	26	62	621	373	113	163	40	34	22
21	26	31	10	28	80	694	301	102	145	39	59	21
22	25	30	9.6	30	94	1000	333	96	135	36	49	21
23	26	29	9.0	32	114	1140	408	88	125	35	45	21
24	27	30	9.2	34	144	1300	373	82	111	46	41	21
25	25	32	9.4	35	208	1200	309	77	136	47	37	22
26	26	31	9.8	36	280	971	278	75	146	64	35	22
27	26	28	10	38	303	838	269	88	135	62	32	22
28	26	25	10	39	252	741	251	103	121	59	31	23
29	25	22	11	40	244	608	251	111	104	55	27	24
30	25	21	12	40	---	521	360	107	94	52	24	24
31	25	---	17	41	---	457	---	99	---	48	23	---
TOTAL	765	865	427.0	1025	2729	16062	24467	8127	3628	1715	1046	662
MEAN	24.7	28.8	13.8	33.1	94.1	518	816	262	121	55.3	33.7	22.1
MAX	27	34	19	41	303	1300	2290	771	194	83	59	24
MIN	22	21	9.0	23	36	135	251	75	78	35	23	21
AC-FT	1520	1720	847	2030	5410	31860	48530	16120	7200	3400	2070	1310

CAL YR 1983	TOTAL	61091.0	MEAN	167	MAX	1860	MIN	9.0	AC-FT	121200
WTR YR 1984	TOTAL	61518.0	MEAN	168	MAX	2290	MIN	9.0	AC-FT	122000

06796973 ELKHORN RIVER NEAR ATKINSON, NE--continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS. 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT											
06...	1115	25	229	7.9	14.0	11.1	20	3100	520	90	29
NOV											
03...	1305	28	224	8.1	13.5	11.4	17	280	700	84	27
DEC											
15...	1020	14	256	--	.5	9.2	14	K4500	2500	100	34
JAN											
26...	1120	35	209	7.1	.5	10.9	12	460	680	86	28
FEB											
21...	1600	85	237	7.5	4.0	11.2	38	560	4600	91	29
MAR											
22...	1635	1020	263	7.2	3.0	12.2	46	440	800	100	32
APR											
17...	1730	716	310	7.7	15.0	9.9	66	580	110	120	38
MAY											
18...	1240	127	304	7.8	17.5	7.9	39	430	110	120	37
JUN											
05...	1455	81	262	8.1	22.5	8.8	47	K2700	100	120	39
JUL											
10...	1520	68	237	7.7	26.0	7.1	52	2000	1100	93	30
AUG											
09...	1035	33	237	7.8	23.5	8.3	10	5000	200	92	30
SEP											
13...	1045	22	235	7.9	18.0	9.0	30	K6500	1300	92	29

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
06...	4.3	11	3.4	7	2.3	.070	.93	1.0	3.3	.180	2.5
NOV											
03...	4.1	11	3.3	7	2.2	.150	1.2	1.3	3.5	.200	3.4
DEC											
15...	4.5	13	4.0	5	3.1	.400	.40	.80	3.9	.310	3.4
JAN											
26...	3.9	9.2	2.8	5	2.4	.280	.52	.80	3.2	.270	2.8
FEB											
21...	4.5	17	4.3	27	1.5	.200	1.0	1.2	2.7	.250	11
MAR											
22...	4.9	15	4.1	29	.10	.020	1.1	1.1	1.2	.090	16
APR											
17...	5.8	10	5.8	5	.20	.140	1.2	1.3	1.5	.100	17
MAY											
18...	6.1	13	4.4	21	1.2	.150	1.6	1.7	2.9	.240	8.7
JUN											
05...	5.8	11	3.1	20	1.4	.010	.89	.90	2.3	.220	9.1
JUL											
10...	4.4	11	3.1	64	1.7	.080	.22	.30	2.0	.260	8.2
AUG											
09...	4.2	11	3.2	22	2.2	.100	.80	.90	3.1	.340	4.8
SEP											
13...	4.7	10	3.4	13	2.2	.080	.52	.60	2.8	.300	3.4

06796973 ELKHORN RIVER NEAR ATKINSON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
NOV 03...	1305	0	9.4	.5	6.1	96	.30	43	160	.22	12
FEB 21...	1600	0	11	.5	6.8	105	.30	34	170	.23	39
MAY 18...	1240	0	16	.7	7.0	150	.50	37	210	.29	72
AUG 09...	1035	0	9.5	.4	6.7	100	.40	47	170	.23	15

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
NOV 03...	2.2	.180	8	100	--	20	<1	<10	<1	220
FEB 21...	1.5	.200	--	--	--	20	--	--	--	--
MAY 18...	1.2	.220	6	100	100	20	1	10	6	450
AUG 09...	2.1	.280	--	--	--	30	--	--	--	--

DATE	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV 03...	170	48	7	10	7	3	<.1	1	<1	10
FEB 21...	--	84	--	--	--	15	--	--	--	--
MAY 18...	390	62	2	40	30	15	10	2	1	40
AUG 09...	--	37	--	--	--	<1	--	--	--	--

AVAILABLE

06796978 HOLT CREEK NEAR EMMET, NE

LOCATION.--Lat 42°25'19", long 98°51'46", in SE1/4SW1/4 sec.5, T.28 N., R.13 W., Holt County, Hydrologic Unit 10220001, on left bank 12 ft downstream from bridge on county road, 4 mi southwest of Emmet.

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,070.12 ft National Geodetic Vertical Datum of 1929. (Levels by Nebraska Natural Resources Commission.)

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--6 years, 30.5 ft³/s, 22,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 562 ft³/s May 29, 1982, gage height, 6.90 ft; maximum gage height, 7.61 ft Feb. 28, 1979, backwater from ice; minimum daily discharge, 0.10 ft³/s Jan. 24, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 468 ft³/s Apr. 8, gage height, 6.15 ft; minimum daily, 3.3 ft³/s Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	6.7	7.8	6.6	7.6	64	130	307	32	13	18	5.1
2	5.5	6.4	7.0	6.8	7.0	80	122	389	33	13	20	5.3
3	5.4	7.4	6.6	7.0	6.4	98	114	340	31	12	18	4.9
4	5.7	7.6	6.4	7.0	6.2	94	136	240	34	12	21	4.8
5	5.7	7.0	6.0	6.8	6.0	83	244	188	26	11	17	4.7
6	5.4	6.7	6.0	6.6	6.2	92	350	181	25	10	12	4.9
7	5.0	6.4	6.2	6.4	6.6	83	413	180	33	11	12	4.8
8	5.1	6.2	6.6	6.2	6.8	102	431	168	34	12	11	5.1
9	5.1	7.4	7.0	6.0	7.2	110	388	136	29	12	9.4	4.9
10	5.4	6.6	7.4	5.8	7.8	118	319	111	27	12	8.9	4.9
11	5.4	6.2	8.2	5.8	8.4	112	315	102	25	12	7.7	5.1
12	5.2	6.5	8.4	5.6	9.0	117	373	90	34	11	6.9	5.2
13	5.0	7.3	8.4	5.2	10	120	426	86	36	8.7	6.1	4.7
14	5.4	7.2	8.0	5.4	11	128	415	76	29	8.6	5.5	4.9
15	5.5	7.0	7.8	5.4	12	160	378	69	24	9.2	5.3	5.1
16	5.3	7.0	7.4	5.6	13	173	305	66	37	9.2	5.2	4.9
17	5.5	7.5	7.2	5.4	14	184	234	60	45	9.0	4.9	4.9
18	5.6	7.4	7.0	5.2	15	227	184	45	62	7.1	4.5	5.0
19	6.7	8.2	6.8	5.4	16	241	161	35	55	7.3	4.6	5.0
20	7.5	7.7	6.4	5.2	17	247	147	34	34	7.5	5.4	4.7
21	7.2	7.0	5.6	5.6	19	265	144	31	29	7.3	12	4.8
22	6.9	7.0	5.0	6.0	21	331	176	31	25	7.3	7.7	4.8
23	6.7	7.2	4.6	6.2	25	420	220	32	23	8.3	7.3	5.0
24	6.6	8.6	4.4	6.4	28	382	236	30	20	9.9	5.9	5.1
25	6.2	9.8	4.6	6.6	34	346	198	30	21	14	4.9	5.2
26	6.5	9.9	5.0	6.8	37	344	180	26	27	27	4.2	5.1
27	6.4	9.8	5.4	7.2	40	305	170	30	20	31	3.3	5.1
28	6.1	9.4	5.6	7.8	44	229	157	40	20	27	4.0	5.2
29	6.1	9.0	5.8	8.0	46	189	162	37	19	21	4.9	5.4
30	6.3	8.4	6.0	8.0	---	157	208	38	14	18	4.9	5.4
31	6.4	---	6.2	8.2	---	150	---	36	---	18	4.9	---
TOTAL	182.4	226.5	200.8	196.2	487.2	5751	7436	3264	903	396.4	267.4	150.0
MEAN	5.88	7.55	6.48	6.33	16.8	186	248	105	30.1	12.8	8.63	5.00
MAX	7.5	9.9	8.4	8.2	46	420	431	389	62	31	21	5.4
MIN	5.0	6.2	4.4	5.2	6.0	64	114	26	14	7.1	3.3	4.7
AC-FT	362	449	398	389	966	11410	14750	6470	1790	786	530	298

CAL YR 1983 TOTAL 18845.4 MEAN 51.6 MAX 449 MIN 3.8 AC-FT 37380
WTR YR 1984 TOTAL 19460.9 MEAN 53.2 MAX 431 MIN 3.3 AC-FT 38600

06797500 ELKHORN RIVER AT EWING, NE

LOCATION.--Lat 42°16'03", long 98°20'11", in NW1/4SW1/4 sec.35, T.27 N., R.9 W., Holt County, Hydrologic Unit 10220001, on right bank 800 ft downstream from bridge on State Highway L-45B, 0.8 mi north of Ewing, and 1.5 mi upstream from South Fork Elkhorn River.

DRAINAGE AREA.--1,400 mi^2, approximately, of which about 740 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--August 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,836.24 ft, National Geodetic Vertical Datum of 1929, levels by Nebraska Department of Roads. Prior to Oct. 22, 1952, at site 300 ft upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--37 years, 177 ft^3/s, 128,200 acre-ft/yr; median of yearly mean discharges, 116 ft^3/s, 84,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft^3/s June 10, 1962, gage height, 10.60 ft; minimum daily, 5.2 ft^3/s Sept. 6, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 11.32 ft June 23, 24, 1947, from floodmark at site 300 ft upstream, discharge, 6,600 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	0530	641	5.71	Apr. 22	1730	1210	6.47
Mar. 4	0830	664	5.74	Apr. 27	0030	952	6.00
Mar. 26	1230	2570	8.28	May 3	1730	2620	8.23
Apr. 9	1430	*4790	9.75	May 7	2330	1870	7.41
Apr. 15	0530	4020	9.31				

Minimum daily discharge, 36 ft^3/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	61	46	50	120	584	1320	1660	218	189	91	49
2	39	59	47	52	140	575	1200	2150	203	176	91	49
3	41	62	50	54	160	614	1210	2520	192	159	92	48
4	42	66	54	56	180	661	1250	2490	186	145	101	47
5	44	64	58	58	170	654	1440	2100	181	143	95	46
6	44	65	60	60	170	580	1900	1940	183	164	86	45
7	44	65	60	62	175	469	2710	1950	174	141	78	44
8	41	65	60	64	180	249	4010	1730	183	124	72	44
9	41	69	62	66	195	198	4580	1490	194	121	69	45
10	43	70	62	68	215	213	4310	1230	235	132	63	46
11	46	72	62	68	240	286	3720	964	229	132	60	46
12	41	74	62	68	300	291	3480	799	261	122	57	46
13	46	79	62	70	370	297	3250	692	327	111	54	45
14	42	81	62	70	450	344	3560	590	276	102	53	45
15	42	80	60	70	428	661	3890	527	246	98	50	45
16	43	73	60	68	423	720	3340	465	240	94	52	45
17	44	73	58	70	420	793	2540	399	285	92	51	44
18	47	73	56	68	457	820	1990	357	364	83	50	44
19	53	82	52	64	211	949	1550	325	460	82	49	42
20	54	82	50	60	171	1120	1170	296	433	81	50	39
21	55	80	48	64	202	1250	990	272	448	72	68	38
22	57	79	47	68	216	1330	1190	252	389	66	89	38
23	58	73	47	70	256	1400	1130	231	347	61	110	38
24	57	70	47	72	312	1760	1150	212	291	69	96	40
25	55	70	47	74	377	2280	1160	208	276	83	87	43
26	56	72	48	76	488	2510	1050	196	282	120	76	46
27	57	68	49	78	556	2450	880	207	261	124	68	48
28	57	60	50	82	626	2210	712	259	255	127	64	48
29	55	58	50	86	595	2020	663	264	238	120	59	49
30	56	46	48	90	---	1770	976	248	212	106	55	51
31	59	---	50	98	---	1540	---	234	---	96	51	---
TOTAL	1495	2091	1674	2124	8803	31598	62321	27257	8069	3535	2187	1343
MEAN	48.2	69.7	54.0	68.5	304	1019	2077	879	269	114	70.5	44.8
MAX	59	82	62	98	626	2510	4580	2520	460	189	110	51
MIN	36	46	46	50	120	198	663	196	174	61	49	38
AC-FT	2970	4150	3320	4210	17460	62670	123600	54060	16000	7010	4340	2660

CAL YR 1983 TOTAL 144206 MEAN 395 MAX 3380 MIN 31 AC-FT 286000
WTR YR 1984 TOTAL 152497 MEAN 417 MAX 4580 MIN 36 AC-FT 302500

06798000 SOUTH FORK ELKHORN RIVER NEAR EWING, NE

LOCATION.--Lat 42°14'29", long 98°23'53", in SE1/4NE1/4 sec.7, T.26 N., R.9 W., Holt County, Hydrologic Unit 10220001, on right bank 17 ft downstream from bridge on county highway, 2.9 mi southwest of intersection with U.S. Highway 275 in Ewing and 5.5 mi upstream from mouth.

DRAINAGE AREA.--314 mi^2, approximately, of which about 190 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--July 1947 to September 1953, August 1960 to September 1972, October 1977 to current year. Prior to October 1977 station published as "at Ewing" at sites 4.5 mi downstream at different datum.

GAGE.--Water-stage recorder. Altitude of gage is 1,880 ft from topographic map. See WSP 1918 for history of changes prior to June 14, 1963.

REMARKS.--Records good except those for winter period, which are poor.

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--25 years (water years 1948-53, 1961-72, 1978-84) 68.3 ft^3/s, 49,480 acre-ft/yr; median of yearly mean discharges, 52 ft^3/s, 37,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,860 ft^3/s Apr. 1, 1983, gage height, 4.77 ft; maximum gage height, 6.12 ft Mar. 7, 1949, backwater from ice, site then in use; minimum daily discharge, 11 ft^3/s Jan. 15, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 21, 1947, reached a stage of 7.22 ft, from floodmarks at site and datum then in use; discharge, about 3,400 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 19	1230	309	2.41	May 2	1330	*1210	3.66
Mar. 24	2200	561	2.87	May 8	1130	689	2.68
Apr. 9	1515	895	3.37	June 22	1800	328	1.90
Apr. 24	0600	581	2.46				

Minimum daily discharge, 26 ft^3/s Oct. 7, 12-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	40	33	42	66	88	224	625	58	70	50	32
2	36	36	33	45	64	84	218	1110	54	64	50	35
3	37	44	33	47	62	82	230	1010	50	60	50	38
4	36	42	34	48	64	84	260	761	52	54	52	35
5	32	40	34	52	82	88	437	550	54	52	48	35
6	28	40	33	52	78	84	832	500	64	50	42	35
7	26	40	34	52	80	80	860	638	58	48	40	32
8	28	37	36	52	84	78	880	657	54	48	42	33
9	32	42	34	50	77	80	895	521	56	52	40	33
10	32	42	35	49	79	72	722	367	58	52	40	33
11	29	37	36	52	79	94	563	264	52	42	38	33
12	26	40	32	49	82	85	630	197	66	44	38	37
13	26	42	33	45	82	73	790	163	60	42	38	32
14	31	42	36	42	86	79	875	141	56	38	35	37
15	32	39	35	39	90	100	780	130	52	38	37	37
16	32	39	35	41	102	102	594	125	60	40	38	37
17	32	37	34	38	102	125	412	88	82	42	37	35
18	37	32	34	35	90	150	283	81	112	42	37	33
19	44	42	33	35	181	138	221	70	122	40	40	32
20	39	37	34	34	160	125	185	72	180	38	40	32
21	36	37	33	37	79	136	172	66	264	33	50	33
22	36	42	32	41	79	180	270	54	300	33	42	35
23	40	42	31	42	64	244	492	50	267	33	37	33
24	42	45	30	46	66	418	563	46	212	38	40	32
25	44	45	30	49	79	512	440	50	257	50	37	32
26	44	47	31	54	90	525	307	52	233	77	37	35
27	45	45	34	60	100	480	245	56	166	77	38	35
28	45	40	37	66	90	451	191	60	122	77	37	37
29	44	38	37	73	90	390	172	66	97	66	37	37
30	44	34	39	71	---	304	228	64	79	62	33	37
31	44	---	41	66	---	251	---	60	---	52	33	---
TOTAL	1115	1205	1056	1504	2527	5782	13971	8694	3397	1554	1253	1032
MEAN	36.0	40.2	34.1	48.5	87.1	187	466	280	113	50.1	40.4	34.4
MAX	45	47	41	73	181	525	895	1110	300	77	52	38
MIN	26	32	30	34	62	72	172	46	50	33	33	32

CAL YR 1983 TOTAL 45438 MEAN 124 MAX 1750 MIN 26
WTR YR 1984 TOTAL 43090 MEAN 118 MAX 1110 MIN 26

06798300 CLEARWATER CREEK NR CLEARWATER, NE

LOCATION.--Lat 42°08'20", long 98°12'10", in SW1/4NW1/4 sec.13, T.25 N., R.8 W., Antelope County, Hydrologic Unit 10220001, on left bank at downstream side of county road bridge, 0.5 mi west and 2 mi south of Clearwater, and about 3 mi upstream from mouth.

DRAINAGE AREA.--210 mi², approximately, of which about 130 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July 1961 to September 1964, October 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,810 ft from topographic map. Prior to Sept. 7, 1961, wire-weight gage at same site and datum.

REMARKS.--Records fair except those for winter period, which are poor.

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--10 years (water years 1962-64, 1978-84), 41.6 ft³/s, 30,140 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 770 ft³/s Mar. 31, 1983, gage height, 8.09 ft from rating curve extended above 538 ft³/s; maximum gage height, 9.00 ft Aug. 5, 1981; minimum daily discharge, 4.4 ft³/s Aug. 8, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 26	1500	127	4.94	May 2	1200	419	6.23
Mar. 15	2200	142	5.09	May 7	2200	*662	7.18
Mar. 23	0700	222	5.62	June 17	2100	441	6.22
Apr. 6	1500	558	6.82	June 25	1500	222	5.19
Apr. 14	1400	412	6.22	July 5	2400	105	4.51
Apr. 23	0600	373	6.05				

Minimum daily discharge, 15 ft³/s Nov. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	26	17	31	74	85	77	295	45	43	23	20
2	22	25	18	33	86	85	75	403	41	40	20	21
3	22	29	18	33	85	91	90	333	38	38	19	21
4	22	32	19	32	81	96	122	268	39	35	23	20
5	22	29	20	35	56	91	339	226	44	42	24	18
6	22	29	21	34	58	87	521	263	40	60	21	19
7	22	28	22	36	60	82	445	551	38	38	18	19
8	22	28	23	38	62	56	405	553	37	34	20	19
9	23	27	24	41	54	54	362	358	33	33	19	19
10	23	28	25	37	60	52	278	254	35	41	19	20
11	24	28	26	40	75	49	248	185	36	41	18	20
12	25	29	27	34	77	48	316	158	49	37	20	26
13	24	30	27	31	76	50	387	130	48	30	20	26
14	24	30	27	28	76	56	403	109	38	26	18	26
15	26	29	25	27	77	118	380	98	34	29	18	26
16	25	28	23	26	80	130	271	88	40	29	17	25
17	24	28	23	25	86	105	184	79	106	27	18	24
18	27	28	22	25	79	90	148	77	210	23	21	25
19	44	38	21	26	44	78	130	76	249	23	19	24
20	33	40	20	27	47	82	111	71	201	24	22	23
21	30	33	19	28	50	90	119	68	130	23	53	21
22	28	32	20	30	55	158	272	60	83	22	34	21
23	28	31	21	32	55	206	358	54	102	18	26	22
24	27	30	23	33	60	211	261	51	133	18	25	23
25	26	30	24	34	92	170	172	65	171	20	23	23
26	25	29	25	37	120	138	141	60	161	44	23	24
27	26	25	27	46	124	127	127	64	109	38	23	24
28	25	17	28	54	108	116	109	72	79	29	20	24
29	25	15	28	59	91	105	107	62	59	27	19	24
30	25	16	29	64	---	99	141	55	49	25	18	25
31	26	---	30	66	---	93	---	48	---	23	18	---
TOTAL	789	847	722	1122	2148	3098	7099	5234	2477	980	679	672
MEAN	25.5	28.2	23.3	36.2	74.1	99.9	237	169	82.6	31.6	21.9	22.4
MAX	44	40	30	66	124	211	521	553	249	60	53	26
MIN	22	15	17	25	44	48	75	48	33	18	17	18
AC-FT	1560	1680	1430	2230	4260	6140	14080	10380	4910	1940	1350	1330

CAL YR 1983	TOTAL	26537	MEAN	72.7	MAX	627	MIN	12	AC-FT	52640
WTR YR 1984	TOTAL	25867	MEAN	70.7	MAX	553	MIN	15	AC-FT	51310

06798500 ELKHORN RIVER AT NELIGH, NE

LOCATION.--Lat 42°07'20", long 98°01'40", in SE1/4NE1/4 sec.20, T.25 N., R.6 W., Antelope County, Hydrologic Unit 10220001, on right bank 30 ft downstream from bridge on old State Highway 14 at Neligh.

DRAINAGE AREA.--2,200 mi², approximately, of which about 1,200 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to September 1958, August 1960 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1006: 1935, 1942. WSP 1390: 1931-32, 1937(M). WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,714.00 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 16, 1933, nonrecording gage at site 10 ft downstream at present datum. Apr. 16, 1933, to Jan. 23, 1939, nonrecording gage at bridge 30 ft upstream at present datum. Jan. 24, 1939, to Oct. 9, 1958, and Aug. 8, 1960, to Sept. 8, 1970, water-stage recorder at site 20 ft upstream at present datum.

REMARKS.--Records good except those for winter period, which are poor.

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--52 years, 296 ft³/s, 214,500 acre-ft/yr; median of yearly mean discharges, 234 ft³/s, 169,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 12,000 ft³/s June 23, 1947, gage height, 12.53 ft, from main channel rating curve extended above 4,900 ft³/s and field estimate of flow through break in highway fill; minimum daily, 12 ft³/s July 2, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1960, reached a stage of 12.24 ft, from floodmark, discharge, 12,300 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 17	0100	1430	5.20	May 3	1530	5040	8.54
Mar. 27	0330	3940	7.64	May 7	0930	3880	7.69
Apr. 9	1300	*6300	9.49	June 18	----	1610	5.61
Apr. 15	0500	5560	9.01	June 23	2100	1170	4.97
Apr. 24	0330	2450	6.32				

Minimum daily discharge, 108 ft³/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	154	120	175	325	835	1500	2500	441	350	201	130
2	108	154	130	185	350	856	1420	3840	416	321	194	130
3	114	165	140	190	400	900	1790	4860	381	299	180	132
4	118	180	160	194	450	979	1880	4740	374	278	194	130
5	116	175	170	200	500	911	2300	3770	409	267	239	120
6	116	170	190	210	480	845	3010	3070	363	361	196	118
7	118	166	210	215	500	706	4050	3810	353	327	175	114
8	114	166	220	220	520	287	5260	3700	360	247	171	114
9	116	178	210	225	540	211	6120	2900	380	239	157	112
10	126	182	210	230	511	275	5730	2120	400	267	152	120
11	132	185	220	230	550	478	5070	1620	450	281	152	126
12	126	190	222	228	546	434	4770	1390	700	256	141	137
13	122	195	220	225	564	646	4760	1190	560	230	139	139
14	132	195	218	220	568	774	5320	1060	520	241	128	128
15	143	190	200	215	612	1050	5440	939	500	211	122	128
16	137	185	185	210	592	1330	4790	905	470	209	124	126
17	132	185	175	200	584	1340	3680	840	800	214	126	120
18	143	185	170	190	584	1260	2700	774	1500	225	130	120
19	220	230	165	185	416	1280	2070	715	1010	222	130	118
20	194	240	160	180	293	1400	1650	659	997	201	130	116
21	173	235	155	180	420	1600	1530	604	956	184	223	112
22	171	225	150	185	474	1980	2040	568	979	168	241	114
23	171	211	145	195	490	2410	2210	524	1020	154	236	122
24	166	195	141	200	584	2680	2360	471	956	139	241	124
25	159	180	140	210	744	3370	2040	516	759	164	222	124
26	154	170	140	220	928	3740	1760	503	911	272	204	126
27	157	175	143	240	933	3720	1540	482	734	327	180	128
28	148	140	146	260	950	3260	1290	625	572	293	166	130
29	141	120	150	270	894	2810	1240	621	471	272	148	132
30	141	115	155	280	---	2330	1570	568	398	244	137	139
31	148	---	160	300	---	1850	---	486	---	222	134	---
TOTAL	4368	5436	5320	6667	16302	46547	90890	51370	19140	7685	5313	3729
MEAN	141	181	172	215	562	1502	3030	1657	638	248	171	124
MAX	220	240	222	300	950	3740	6120	4860	1500	361	241	139
MIN	108	115	120	175	293	211	1240	471	353	139	122	112
AC-FT	8660	10780	10550	13220	32340	92330	180300	101900	37960	15240	10540	7400

CAL YR 1983	TOTAL	262734	MEAN	720	MAX	6690	MIN	79	AC-FT	521100
WTR YR 1984	TOTAL	262767	MEAN	718	MAX	6120	MIN	108	AC-FT	521200

06799000 ELKHORN RIVER AT NORFOLK, NE

LOCATION.--Lat 42°00'14", long 97°25'31", in SW1/4SW1/4 sec.34, T.24 N., R.1 W., Madison County, Hydrologic Unit 10220001, on left bank 200 ft downstream from U.S. Highway 81 bridge, 1 mi south of intersection of U.S. Highways 81 and 275, and 3.6 mi upstream from North Fork Elkhorn River.

DRAINAGE AREA.--2,790 mi^2, approximately, of which about 1,790 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1896 to November 1903 (no winter records), October 1945 to current year. Gage height records collected at site 200 ft upstream from May 10, 1941 to Sept. 26, 1945 are contained in reports of U.S. Weather Bureau. Published as "near Norfolk" from October 1957 to September 1977.

REVISED RECORDS.--WSP 1390: 1898-1900. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,504.95 ft National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Aug. 30, 1958. Aug. 30, 1958, to July 27, 1978, water-stage recorder at site 3.2 mi upstream at datum 17.88 ft higher.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--39 years, 505 ft^3/s, 365,900 acre-ft/yr; median of yearly mean discharges, 411 ft^3/s, 298,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft^3/s June 14, 1967, gage height, 8.52 ft, site and datum then in use; maximum gage height observed, 13.63 ft Mar. 11, 1949, at site 200 ft upstream at present datum, backwater from ice; minimum daily discharge, 33 ft^3/s Aug. 3, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 13, 1944, reached a stage of 11.8 ft, at site 200 ft upstream at present datum, discharge, 14,300 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 27	0100	3810	4.30	May 4	1230	3990	4.26
Apr. 3	0745	3650	3.95	May 7	0045	3930	4.30
Apr. 10	2100	*2790	a6.05	June 16	2400	2440	3.61
Apr. 26	0745	4970	4.48	June 18	0530	5950	5.48

a From floodmark

Minimum daily discharge, 181 ft^3/s Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	273	210	280	600	1110	1890	2750	631	668	389	191
2	182	275	240	290	700	1030	1870	3140	588	599	366	200
3	184	308	270	310	1000	1060	3170	3660	561	563	317	206
4	191	320	290	320	1200	1250	2510	3920	535	513	303	226
5	195	332	320	330	1200	1140	2360	3480	538	471	302	220
6	192	332	350	340	1100	1030	2800	3040	582	1230	298	226
7	191	326	380	350	1100	1020	3960	3660	594	750	295	229
8	187	290	400	350	1040	743	5390	3100	581	552	282	221
9	181	296	390	360	1000	491	6410	2730	540	468	251	210
10	184	290	390	380	1040	546	7520	2050	591	457	230	221
11	196	290	390	400	1080	636	7370	1580	627	477	225	223
12	203	284	400	410	1120	857	6860	1270	1180	486	224	222
13	200	302	400	410	1400	752	5660	1070	979	452	218	222
14	193	314	400	400	1600	1050	5370	973	814	400	214	238
15	216	308	395	390	1800	1050	5610	864	792	395	209	222
16	242	296	380	370	1450	1510	5380	825	1290	367	205	225
17	239	290	370	360	1200	1580	4530	820	1690	418	199	229
18	238	302	380	350	1080	1430	3190	924	4350	381	205	220
19	298	339	380	340	842	1390	2310	890	1260	335	199	212
20	345	440	350	330	483	1520	2040	966	863	316	183	206
21	336	447	330	330	485	1670	2050	863	874	304	266	195
22	303	398	300	320	535	2200	3080	778	1040	308	383	196
23	298	371	290	320	502	2780	2970	732	1150	296	326	206
24	301	326	290	330	604	2880	2920	671	1300	281	260	208
25	280	302	280	340	750	3300	2540	1010	1050	268	289	205
26	276	284	270	360	891	4010	3580	897	985	280	287	209
27	283	234	260	390	1070	3990	2290	734	1110	350	259	216
28	265	314	260	420	1080	3530	1780	725	986	420	245	219
29	254	200	260	440	1100	3030	1690	763	836	430	226	231
30	266	205	270	470	---	2630	2350	768	737	390	204	245
31	273	---	280	540	---	2220	---	703	---	380	194	---
TOTAL	7380	9288	10175	11330	29052	53435	111450	50356	29654	14005	8053	6499
MEAN	238	310	328	365	1002	1724	3715	1624	988	452	260	217
MAX	345	447	400	540	1800	4010	7520	3920	4350	1230	389	245
MIN	181	200	210	280	483	491	1690	671	535	268	183	191
AC-FT	14640	18420	20180	22470	57620	106000	221100	99880	58820	27780	15970	12890

CAL YR 1983 TOTAL 352240 MEAN 965 MAX 7430 MIN 153 AC-FT 698700
WTR YR 1984 TOTAL 340677 MEAN 931 MAX 7520 MIN 181 AC-FT 675700

06799000 ELKHORN RIVER AT NORFOLK, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-69, 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT 18...	1410	230	346	7.3	13.0	8.8	18	K170	340	170	51
NOV 08...	1730	296	375	8.3	8.0	12.6	19	K230	460	160	50
DEC 29...	0900	273	400	7.4	.0	6.1	17	2200	860	170	52
JAN 09...	1200	447	365	7.9	.5	11.5	16	1100	7200	150	46
FEB 01...	0845	469	340	7.1	.0	15.3	26	5000	9100	140	44
MAR 21...	1600	1610	310	8.4	3.0	11.2	69	7700	12000	120	38
APR 24...	1730	2820	320	7.7	14.0	9.8	61	1600	340	140	42
MAY 07...	1500	3490	320	7.9	11.5	10.8	110	--	--	120	37
JUN 13...	0800	930	335	7.8	21.0	7.6	170	45000	80000	140	42
JUL 25...	1620	262	340	7.9	24.0	10.0	120	K200	2000	160	50
AUG 14...	1400	204	366	8.2	29.0	9.2	50	K93	550	160	50
SEP 05...	1415	371	358	8.4	22.0	10.2	50	K60	940	170	53

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 18...	10	13	3.9	25	.80	.120	1.1	1.2	2.0	.320	4.4
NOV 08...	7.9	13	3.6	39	1.0	.100	1.1	1.2	2.2	.290	4.5
DEC 29...	9.6	15	4.3	4	1.1	.330	.47	.80	1.9	.220	2.9
JAN 09...	8.0	14	4.2	12	1.0	.340	.26	.60	1.6	.250	4.4
FEB 01...	7.5	12	3.6	30	1.0	.320	.68	1.0	2.0	.290	5.3
MAR 21...	6.3	12	5.3	352	.50	.490	2.0	2.5	3.0	.540	21
APR 24...	7.4	14	5.4	233	.50	.090	2.9	3.0	3.5	.330	15
MAY 07...	6.5	18	4.5	558	.50	.190	4.3	4.5	5.0	.190	32
JUN 13...	7.6	11	3.5	2170	1.3	.080	7.9	8.0	9.3	.600	47
JUL 25...	8.3	13	4.0	59	<.10	.030	1.7	1.7	--	.360	11
AUG 14...	8.0	13	4.1	44	<.10	.040	1.2	1.2	--	.340	12
SEP 05...	8.4	13	3.8	68	<.10	.030	1.3	1.3	--	.280	>30

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
NOV										
08...	1730	0	10	.4	7.0	165	.30	40	230	.31
FEB										
01...	0845	0	9.2	.4	6.9	154	.30	35	210	.29
MAY										
07...	1500	0	13	.5	8.4	140	.40	18	190	.26
AUG										
14...	1400	0	11	.4	7.4	178	.40	42	240	.33

DATE	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
NOV										
08...	185	.94	.230	7	200	30	1	<10	14	1500
FEB										
01...	267	1.0	.190	--	--	30	--	--	--	--
MAY										
07...	1790	.38	.170	5	500	20	<1	30	32	29000
AUG										
14...	134	<.10	.120	--	--	30	--	--	--	--

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE) (01044)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN) (01054)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
NOV										
08...	1500	17	3	150	140	14	<.1	2	<1	50
FEB										
01...	--	57	--	--	--	35	--	--	--	--
MAY										
07...	29000	100	17	570	560	8	.2	1	<1	150
AUG										
14...	--	7	--	--	--	12	--	--	--	--

06799080 WILLOW CREEK NEAR FOSTER, NE

LOCATION.--Lat 42°10'38", long 97°40'02" in NW1/4NE1/4 sec.4, T.25 N., R.3 W., Pierce County, Hydrologic Unit 10220002, on left downstream bank at county road bridge, 6.8 mi south of Foster and 7.2 mi southwest of Pierce.

DRAINAGE AREA.--137 mi².

PERIOD OF RECORD.--October 1975 (monthly discharge only) to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,650 ft from topographic map.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--9 years, 13.5 ft³/s, 9,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 442 ft³/s Apr. 13, 1984, gage height, 7.41 ft, from floodmark; maximum gage height, 8.28 ft Feb. 24, 1983, backwater from ice; minimum daily discharge, 1.5 ft³/s Feb. 2, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 16	0130	109	5.02	May 1	2100	363	7.07
Mar. 25	2030	302	6.57	May 8	0830	202	5.99
Apr. 4	unknown	a330	unknown	June 16	0700	273	6.55
Apr. 13	unknown	*442	b7.41	June 18	0900	119	5.19
Apr. 23	1400	164	5.59	June 20	0830	246	6.35
Apr. 26	1530	110	5.00				

a Estimated

b From floodmark

Minimum daily discharge, 5.6 ft³/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	9.6	9.8	13	24	19	49	264	20	16	9.7	7.5
2	5.8	9.5	10	13	25	20	59	259	17	15	9.6	7.6
3	6.2	9.7	10	14	25	21	225	137	15	14	9.3	7.4
4	6.5	9.7	11	14	25	21	285	81	14	13	9.4	7.5
5	5.7	9.5	11	14	23	20	240	61	13	13	9.2	7.1
6	5.6	9.4	12	14	21	20	170	70	16	14	9.0	7.3
7	5.8	9.2	12	14	25	19	130	129	15	13	8.7	7.2
8	5.8	8.9	13	15	30	14	100	182	14	13	9.0	7.3
9	6.1	11	13	15	35	16	82	91	15	13	8.5	7.5
10	7.2	10	14	14	59	18	70	51	16	14	8.5	8.0
11	7.5	9.4	15	14	76	18	70	41	15	14	8.3	8.3
12	7.0	9.8	14	13	94	19	160	35	27	13	8.2	8.3
13	7.5	11	13	13	88	20	400	31	23	12	8.1	7.7
14	8.0	11	13	14	81	21	390	27	19	12	7.9	7.4
15	11	9.6	13	14	101	24	300	24	18	13	7.8	8.0
16	8.7	9.5	14	14	105	26	160	23	138	12	8.0	7.9
17	7.9	9.7	13	13	77	28	100	20	79	11	7.9	8.1
18	8.6	9.6	13	14	58	27	50	21	102	11	8.0	8.5
19	16	17	12	14	32	27	34	22	91	11	7.8	8.2
20	11	18	12	13	24	27	32	20	186	11	7.8	7.9
21	9.7	14	12	14	26	40	42	17	158	11	15	7.6
22	9.4	13	12	14	29	81	95	15	68	10	10	7.8
23	9.5	13	13	14	27	164	149	15	64	9.9	9.5	8.9
24	9.1	12	13	15	26	251	100	14	64	9.7	9.3	9.2
25	8.7	13	13	16	27	263	59	21	60	9.8	9.4	9.3
26	9.0	12	14	16	25	241	95	19	60	13	9.4	6.9
27	9.2	12	12	17	21	203	80	24	38	11	8.9	7.1
28	8.5	11	12	18	19	144	63	34	26	11	8.6	7.3
29	8.9	10	12	20	18	100	53	34	21	10	8.0	8.1
30	8.9	10	12	23	---	73	110	34	17	9.9	7.8	9.0
31	9.2	---	13	24	---	59	---	26	---	9.7	7.6	---
TOTAL	254.3	331.1	385.8	467	1246	2044	3952	1842	1429	373.0	274.2	235.9
MEAN	8.20	11.0	12.4	15.1	43.0	65.9	132	59.4	47.6	12.0	8.85	7.86
MAX	16	18	15	24	105	263	400	264	186	16	15	9.3
MIN	5.6	8.9	9.8	13	18	14	32	14	13	9.7	7.6	6.9
AC-FT	504	657	765	926	2470	4050	7840	3650	2830	740	544	468

CAL YR 1983	TOTAL	9917.7	MEAN	27.2	MAX	330	MIN	5.1	AC-FT	19670
WTR YR 1984	TOTAL	12834.3	MEAN	35.1	MAX	400	MIN	5.6	AC-FT	25460

06799100 NORTH FORK ELKHORN RIVER NEAR PIERCE, NE

LOCATION.--Lat 42°10'44", long 97°29'04", in SW1/4 sec.31, T.26 N., R.1 W., Pierce County, Hydrologic Unit 10220002, on left downstream wingwall of county road bridge, 2.5 mi southeast of Pierce.

DRAINAGE AREA.--700 mi², approximately, of which about 30 mi² is noncontributing.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,553.07 ft National Geodetic Vertical Datum of 1929 (U.S. Weather Bureau levels).

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--24 years, 89.1 ft³/s, 64,550 acre-ft/yr; median of yearly mean discharges, 66 ft³/s, 47,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s Feb. 19, 1971, gage height, 15.10 ft; minimum daily, 3.8 ft³/s July 24, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 870 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 26	2330	1590	11.51	May 1	0900	1880	12.37
Apr. 3	2000	2150	12.73	May 7	0730	1700	11.91
Apr. 13	0930	2260	12.93	June 16	2030	944	8.95
Apr. 23	0130	1080	9.53	June 20	1930	1250	10.40
Apr. 26	1500	1660	11.81	June 22	1600	*2370	13.15

Minimum daily discharge, 25 ft³/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	28	37	54	62	99	501	1790	199	186	59	32
2	26	28	40	56	60	106	532	1650	175	171	122	33
3	27	30	44	58	58	107	1580	1130	159	158	80	33
4	26	30	48	58	58	121	1950	780	152	145	62	34
5	28	30	52	56	56	116	1400	614	151	137	55	35
6	26	30	50	51	56	116	1000	767	206	138	53	31
7	26	31	48	48	58	109	800	1530	168	126	49	31
8	25	32	48	48	60	100	1500	1030	192	118	46	31
9	26	36	48	46	62	90	1100	594	170	116	45	33
10	27	35	53	48	64	80	830	487	262	116	41	29
11	27	34	52	54	70	78	859	433	174	119	40	30
12	27	36	50	52	76	76	2030	417	367	117	38	32
13	28	38	54	48	84	74	2210	620	354	106	38	33
14	26	40	50	50	98	81	1870	382	296	95	37	32
15	36	40	48	52	122	132	1380	310	209	89	34	33
16	32	38	46	52	253	152	866	270	528	86	37	33
17	29	39	44	50	384	123	646	240	584	209	38	32
18	30	37	43	48	381	107	519	220	410	150	41	32
19	41	46	37	47	409	96	436	350	363	116	38	31
20	38	67	34	45	397	94	372	250	807	262	38	31
21	33	66	35	47	397	136	431	217	644	210	50	30
22	31	63	34	48	291	249	963	197	2050	97	54	31
23	31	53	36	50	101	387	959	181	1980	76	49	32
24	29	59	40	50	99	477	599	167	1710	67	45	32
25	27	49	43	52	104	738	450	257	988	63	41	32
26	27	44	46	52	112	1360	1320	232	441	107	41	33
27	27	44	45	54	114	1440	1120	249	379	134	39	33
28	27	42	42	56	111	1080	643	432	376	89	36	34
29	26	40	45	58	102	791	495	438	300	75	34	34
30	27	38	50	60	---	614	772	298	208	65	32	35
31	28	---	52	62	---	564	---	230	---	58	32	---
TOTAL	891	1223	1395	1610	4299	9893	30133	16762	15002	3801	1444	967
MEAN	28.7	40.8	45.0	51.9	148	319	1004	541	500	123	46.6	32.2
MAX	41	67	54	62	409	1440	2210	1790	2050	262	122	35
MIN	25	28	34	45	56	74	372	167	151	58	32	29
AC-FT	1770	2430	2770	3190	8530	19620	59770	33250	29760	7540	2860	1920

CAL YR 1983 TOTAL 64427 MEAN 177 MAX 1770 MIN 22 AC-FT 127800
WTR YR 1984 TOTAL 87420 MEAN 239 MAX 2210 MIN 25 AC-FT 173400

06799230 UNION CREEK AT MADISON, NE

LOCATION.--Lat 41°49'52", long 97°27'19", in SW1/4SE1/4 sec.32, T.22 N., R.1 W., Madison County, Hydrologic Unit 10220003, on left bank 12 ft downstream from bridge on U.S. Highway 81, in Madison.

DRAINAGE AREA.--174 mi².

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,549.70 ft, National Geodetic Vertical Datum of 1929, levels by Nebraska Natural Resources Commission.

REMARKS.--Records good.

AVERAGE DISCHARGE.--6 years, 38.8 ft³/s, 28,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,630 ft³/s June 17, 1984, gage height, 22.90 ft; minimum daily, 3.6 ft³/s July 30, 31, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,630 ft³/s June 17, gage height, 22.90 ft; minimum daily, 11.0 ft³/s Aug. 29-31, Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	18	16	19	34	31	63	266	31	36	20	12
2	13	18	18	19	46	31	126	141	30	34	19	11
3	14	22	18	19	74	31	1070	76	30	33	18	12
4	13	21	17	19	122	40	290	66	29	32	22	12
5	12	19	18	21	74	38	100	66	29	32	19	12
6	12	19	19	22	66	37	68	182	27	34	18	12
7	13	19	19	22	49	33	118	411	41	43	17	12
8	15	19	19	21	46	34	230	67	29	33	17	12
9	14	25	21	20	44	30	118	51	28	30	16	12
10	13	25	22	19	45	26	70	49	28	31	16	12
11	13	24	21	19	47	25	215	45	40	29	16	12
12	14	24	19	19	48	24	637	43	652	28	16	13
13	14	24	21	18	53	24	125	39	314	26	15	12
14	14	22	21	17	62	28	94	36	43	26	14	13
15	14	20	21	18	75	40	94	36	33	26	13	13
16	14	20	20	18	136	39	61	35	193	25	13	13
17	14	19	19	17	102	37	53	34	1950	25	13	13
18	17	19	17	17	48	35	49	273	1780	23	12	13
19	23	31	18	17	39	36	47	200	196	22	12	12
20	18	43	18	17	37	30	46	64	74	23	12	12
21	17	30	17	17	32	35	224	48	106	21	19	13
22	17	25	17	18	29	44	349	45	45	21	14	13
23	17	22	17	18	30	55	92	41	982	21	15	14
24	18	19	17	18	31	79	61	40	811	20	16	15
25	17	20	22	18	31	307	52	123	65	22	14	15
26	18	20	24	19	31	813	68	71	60	42	14	15
27	18	16	23	19	31	775	54	43	46	56	13	15
28	18	16	20	23	30	444	44	42	41	27	12	15
29	17	20	18	28	31	145	60	39	39	23	11	15
30	17	19	19	31	---	82	186	35	36	21	11	16
31	18	---	20	31	---	67	---	34	---	20	11	---
TOTAL	478	658	596	618	1523	3495	4864	2741	7808	885	468	391
MEAN	15.4	21.9	19.2	19.9	52.5	113	162	88.4	260	28.5	15.1	13.0
MAX	23	43	24	31	136	813	1070	411	1950	56	22	16
MIN	12	16	16	17	29	24	44	34	27	20	11	11
AC-FT	948	1310	1180	1230	3020	6930	9650	5440	15490	1760	928	776

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CAL YR 1983   TOTAL   16557.8      MEAN    45.4     MAX    1840     MIN     7.2     AC-FT   32860
WTR YR 1984   TOTAL     24525      MEAN    67.0     MAX    1950     MIN     11      AC-FT   48650
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06799350 ELKHORN RIVER AT WEST POINT, NE

LOCATION.--Lat 41°50'22", long 96°43'38", in SW1/4NW1/4 sec.34, T.22 N., R.6 E., Cuming county, Hydrologic Unit 10220003, on right bank near right downstream wingwall of bridge on State Highway 32 and 1 mi west of West Point.

DRAINAGE AREA.--5,100 mi^2, approximately, of which about 4,100 mi^2 contributes directly to surface runoff.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year. March 1960 to September 1972 (no winter records 1960-68) in files of Corps of Engineers. Gage-height records collected since 1940 are in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,291.26 ft National Geodetic Vertical Datum of 1929. Prior to May 18, 1976, at site on left bank 50 ft upstream from bridge at same datum.

REMARKS.--Records fair except those for winter period, which are poor. Some small diversions above station for irrigation.

AVERAGE DISCHARGE.--16 years (water years 1969-84), 834 ft^3/s, 604,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, 33,000 ft^3/s June 25, 1969, gage height, 13.21 ft; maximum gage height, 16.09 ft Mar. 18, 1978, ice jam; minimum daily, 41 ft^3/s Aug. 31, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31, 1960 reached a stage of 19.09 ft, backwater from ice; observed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 27	1030	7960	9.22	June 7	2130	7920	9.21
Apr. 3	1330	9220	9.51	June 12	0930	12500	a10.72
Apr. 12	1400	14200	10.52	June 15	1230	5450	8.70
Apr. 22	1700	6560	8.84	June 16	1230	13590	11.12
Apr. 26	1830	6690	8.88	June 19	0300	*24300	12.49
May 3	1700	7750	9.17	June 20	1530	4990	8.50
May 7	1930	9110	9.48	June 21	2400	6230	8.88
May 18	1800	5290	8.45	June 23	1030	8450	9.54

a From floodmark

Minimum daily discharge, 340 ft^3/s Nov. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	420	431	360	470	1000	2420	2860	6910	1560	1180	728	411
2	392	443	390	490	1400	2340	2750	7320	1710	1210	698	385
3	387	458	470	500	2000	2260	7860	7540	1710	1210	676	376
4	382	475	540	520	2300	2600	7350	7520	1710	1250	696	376
5	384	507	600	520	2200	2790	5430	7020	1770	1270	716	386
6	381	505	620	520	2000	2520	4680	6490	1730	1600	672	386
7	381	505	660	520	1900	2120	5680	8600	2630	2520	655	386
8	361	486	660	540	1800	1710	8630	7710	3220	1450	637	392
9	356	495	660	580	1800	1290	9190	6290	1370	1130	610	381
10	361	526	640	600	1900	1260	8840	5280	1240	1030	578	386
11	372	513	640	640	2100	1140	8620	4400	1690	1030	563	409
12	365	507	660	660	2300	1230	13300	3330	8180	985	541	420
13	369	503	660	640	2500	1660	10900	2800	5510	949	530	409
14	373	510	640	640	2600	1340	8710	2540	2600	865	518	397
15	376	503	620	600	2700	2180	8470	1940	3020	833	506	386
16	365	502	600	580	3000	2340	8030	1760	8650	805	485	403
17	370	473	560	560	4300	2600	6850	1640	6900	877	482	403
18	397	459	580	520	3200	2460	5710	3060	18100	889	473	397
19	505	494	560	500	2400	2210	4470	4660	7370	936	461	386
20	537	651	520	480	1800	2100	3110	2680	3620	813	456	370
21	530	719	480	480	1700	2120	2970	1750	2850	756	482	365
22	518	705	450	470	1700	3120	6060	2580	2910	844	538	360
23	492	655	420	500	1800	4220	5550	1820	5360	750	599	354
24	486	629	400	520	2100	5000	4740	1480	5790	654	631	365
25	480	624	370	540	2500	6070	4030	2400	4130	617	588	354
26	465	613	350	580	2700	7400	4690	2920	1890	690	565	360
27	460	500	350	620	2860	7830	5100	2170	1650	997	539	370
28	447	400	360	660	2830	7040	3380	2300	1600	1050	523	376
29	432	340	400	680	2640	5760	2830	2170	1340	1030	501	386
30	430	350	430	760	---	4420	4340	1960	1290	835	471	403
31	426	---	450	840	---	3410	---	1670	---	769	437	---
TOTAL	13000	15481	16100	17730	66030	96960	185130	122710	113100	31824	17555	11538
MEAN	419	516	519	572	2277	3128	6171	3958	3770	1027	566	385
MAX	537	719	660	840	4300	7830	13300	8600	18100	2520	728	420
MIN	356	340	350	470	1000	1140	2750	1480	1240	617	437	354
AC-FT	25790	30710	31930	35170	131000	192300	367200	243400	224300	63120	34820	22890

CAL YR 1983 TOTAL 598063 MEAN 1639 MAX 8630 MIN 248 AC-FT 1186000
WTR YR 1984 TOTAL 707158 MEAN 1932 MAX 18100 MIN 340 AC-FT 1403000

PLATTE RIVER BASIN

06799350 ELKHORN RIVER AT WEST POINT, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-69, October 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT											
18...	1100	440	464	8.3	11.0	10.5	23	200	690	210	61
NOV											
08...	1145	487	520	8.4	10.0	9.8	21	K560	800	200	60
DEC											
29...	1415	395	548	7.4	.0	7.8	18	4400	3900	240	70
JAN											
09...	1500	674	515	8.0	.0	10.8	17	2700	K240000	210	63
31...	1350	841	490	7.3	.0	10.8	30	2200	K23000	200	59
MAR											
21...	1140	2330	390	8.3	3.0	11.5	59	9300	30000	160	49
APR											
24...	1045	4660	465	7.8	10.0	10.6	72	5400	3800	210	61
MAY											
07...	1315	8350	430	7.8	11.0	9.5	120	--	--	170	50
JUN											
12...	1415	9080	305	7.2	19.5	6.0	420	K350000	>100000	120	34
JUL											
25...	1440	620	480	8.2	24.0	12.7	56	770	1200	220	61
AUG											
14...	1130	498	400	7.9	25.0	12.2	100	900	1400	150	38
SEP											
05...	1900	385	348	8.3	22.0	13.7	60	K73	980	130	29

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
18...	13	30	9.8	56	1.4	.050	1.5	1.5	2.9	.410	4.7
NOV											
08...	13	27	12	65	1.6	.060	2.1	2.2	3.8	.330	5.1
DEC											
29...	15	34	9.4	20	2.0	.510	.69	1.2	3.2	.230	3.3
JAN											
09...	13	32	12	20	1.9	.770	.73	1.5	3.4	.300	5.0
31...	12	30	8.5	42	1.8	.640	.96	1.6	3.4	.370	7.4
MAR											
21...	9.6	25	6.8	144	1.2	.380	1.7	2.1	3.3	.530	15
APR											
24...	14	49	9.3	380	1.8	.210	6.3	6.5	8.3	.590	20
MAY											
07...	11	35	7.7	1150	1.3	.260	13	13	14	1.20	41
JUN											
12...	7.5	21	4.8	6300	1.7	.390	5.6	6.0	7.7	3.20	160
JUL											
25...	16	48	9.9	134	.70	.040	2.5	2.5	3.2	.400	11
AUG											
14...	14	43	11	80	<.10	.060	2.0	2.1	--	.300	10
SEP											
05...	13	34	10	100	<.10	.030	2.4	2.4	--	.250	6.0

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06799350 ELKHORN RIVER AT WEST POINT, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
NOV 08...	1145	0	27	.9	8.2	212	.30	34	310	.42
JAN 31...	1350	1	15	.5	7.6	196	.30	30	280	.38
MAY 07...	1315	4	18	.6	9.0	166	.40	16	250	.34
AUG 14...	1100	11	18	.7	7.4	142	.30	24	240	.33

DATE	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
NOV 08...	406	1.6	.240	7	200	50	1	<10	7	1900
JAN 31...	636	1.7	.250	--	--	40	--	--	--	--
MAY 07...	5560	1.3	.200	5	400	30	<1	30	39	34000
AUG 14...	324	<.10	.010	--	--	50	--	--	--	--

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE) (01044)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN) (01054)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
NOV 08...	1900	11	4	270	250	22	<.1	4	<1	20
JAN 31...	--	17	--	--	--	38	--	--	--	--
MAY 07...	34000	110	15	990	980	10	.2	3	<1	150
AUG 14...	--	9	--	--	--	11	--	--	--	--

06799385 PEBBLE CREEK AT SCRIBNER, NE

LOCATION.--Lat 41°39'34", long 96°41'00", in NW1/4SE1/4 sec.36, T.20 N., R.6 E., Dodge County, Hydrologic Unit 10220003, on right bank 12 ft downstream from bridge on county road, 1 mi southwest of Scribner and 3 mi upstream from mouth.

DRAINAGE AREA.--204 mi^2.

PERIOD OF RECORD.--October 1978 to current year.

REVISED RECORDS.--WRD NE-82-1: 1980.

GAGE.--Water-stage recorder. Datum of gage is 1,234.72 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--6 years, 72.5 ft^3/s, 52,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft^3/s June 16, 1984, gage height, 23.75 ft; minimum daily, 0.29 ft^3/s July 20, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,300 ft^3/s June 16, gage height, 23.75 ft; minimum daily, 13 ft^3/s Oct. 8-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	28	22	34	400	60	66	490	72	86	44	21
2	18	28	21	35	560	94	399	317	82	81	42	20
3	28	33	25	36	370	61	1410	345	65	72	39	21
4	24	47	28	36	350	581	312	298	60	87	38	22
5	16	34	29	37	220	254	156	277	58	164	36	21
6	16	32	27	37	250	86	130	639	58	114	34	20
7	14	32	27	37	130	52	232	722	56	90	33	19
8	13	33	27	36	110	45	577	177	54	76	31	19
9	13	58	29	35	155	41	241	125	60	76	30	19
10	13	96	32	33	162	40	180	119	100	76	29	21
11	13	49	32	31	148	40	350	110	500	72	29	22
12	13	42	30	30	190	44	555	98	1900	64	28	22
13	14	44	29	30	141	35	211	92	2640	60	27	21
14	14	42	28	30	114	98	159	72	367	60	26	21
15	15	36	27	30	215	527	114	70	3440	59	25	21
16	16	34	28	29	590	115	90	72	9100	60	26	22
17	17	33	28	29	200	64	78	60	6080	68	25	22
18	20	32	29	28	63	59	68	877	1600	62	24	22
19	53	41	29	28	34	34	63	915	249	56	26	21
20	50	66	29	28	45	40	61	251	156	57	24	21
21	34	39	29	29	45	140	317	151	135	54	39	20
22	28	32	29	31	55	556	346	926	130	54	34	20
23	27	31	28	32	77	534	175	207	1120	39	26	23
24	26	27	27	35	106	401	94	128	266	45	24	23
25	25	28	30	37	159	368	76	518	136	42	25	23
26	25	28	32	40	197	449	74	167	125	76	26	24
27	25	27	32	43	108	329	65	140	110	65	25	23
28	25	26	32	47	61	153	51	194	110	60	24	24
29	26	24	32	60	54	147	154	107	103	54	22	24
30	26	23	31	130	---	78	482	90	94	50	21	24
31	27	---	32	270	---	73	---	78	---	47	21	---
TOTAL	693	1125	890	1403	5309	5598	7286	8832	29026	2126	903	646
MEAN	22.4	37.5	28.7	45.3	183	181	243	285	968	68.6	29.1	21.5
MAX	53	96	32	270	590	581	1410	926	9100	164	44	24
MIN	13	23	21	28	34	34	51	60	54	39	21	19
AC-FT	1370	2230	1770	2780	10530	11100	14450	17520	57570	4220	1790	1280

CAL YR 1983 TOTAL 35270 MEAN 96.6 MAX 3560 MIN 13 AC-FT 69960
WTR YR 1984 TOTAL 63837 MEAN 174 MAX 9100 MIN 13 AC-FT 126600

06799450 LOGAN CREEK AT PENDER, NE

LOCATION.--Lat 42°06'40", long 96°42'00", in NW1/4 sec.26, T.25 N., R.6 E., Thurston County, Hydrologic Unit 10220004, on right bank 200 ft downstream from bridge on Nebraska State Highway 94 at Pender and 0.7 mi downstream from Rattlesnake Creek.

DRAINAGE AREA.--731 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,300.96 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 23, 1966, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--19 years, 152 ft³/s, 110,100 acre-ft/yr; median of yearly mean discharges, 120 ft³/s, 86,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,900 ft³/s Feb. 19, 1971, gage height, 23.11 ft; minimum daily, 12 ft³/s Aug. 11, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 26	0400	2820	9.50	June 12	1430	6710	14.32
Apr. 3	1515	3980	11.20	June 14	2215	4400	11.74
a	----	unknown	unknown	June 16	1730	*9750	16.96
Apr. 12	unknown	5300	b12.81	June 17	2045	5510	13.05
Apr. 22	1145	2490	8.92	June 20	1730	9220	16.54
Apr. 26	1730	1760	7.54	June 22	----	unknown	unknown
May 1	0615	3340	10.31	June 23	----	unknown	unknown
May 7	0900	2670	9.23	June 26	1615	1890	7.81
June 7	1830	4630	12.04				

a Sometime during period Apr. 7-11

b From floodmark

Minimum daily discharge, 64 ft³/s Dec. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	103	100	120	160	232	614	2710	395	448	249	144
2	90	100	104	120	165	229	726	1850	349	420	236	145
3	89	101	110	140	170	216	3090	1130	329	411	223	144
4	90	102	120	150	165	252	2120	1000	333	394	222	144
5	92	102	130	170	130	266	1140	1090	371	390	239	147
6	89	103	104	160	170	243	822	930	359	385	216	144
7	88	102	102	150	180	229	800	2020	1390	380	210	140
8	88	104	104	140	190	254	2500	953	1940	370	204	141
9	87	112	100	140	220	140	2000	721	642	360	200	142
10	89	131	114	125	250	130	1200	648	677	361	189	145
11	91	124	104	140	300	170	1500	637	857	384	180	149
12	90	119	100	135	350	180	4230	627	4830	348	178	152
13	90	130	104	110	420	190	2220	614	1880	321	175	152
14	90	130	104	114	500	216	1470	542	1300	296	171	147
15	89	125	96	120	558	334	1100	475	2230	297	166	143
16	94	120	80	116	995	354	787	488	5110	309	164	142
17	92	110	84	110	700	335	633	437	2760	602	162	140
18	93	100	70	100	429	296	552	472	1350	455	163	138
19	105	120	72	104	189	252	497	569	734	322	159	139
20	128	140	74	80	194	245	454	473	4470	456	153	137
21	116	160	66	114	209	258	668	410	2940	363	166	131
22	107	140	64	120	218	309	2290	423	6780	283	211	128
23	102	120	72	125	236	511	1440	379	2730	254	184	130
24	102	106	70	130	250	750	774	345	1450	238	171	133
25	99	106	72	140	261	1320	611	710	884	228	165	134
26	100	106	92	145	264	2430	1240	606	694	1020	168	135
27	101	150	90	145	261	2110	973	524	592	577	172	137
28	100	130	88	155	238	1730	604	1020	529	340	160	140
29	98	125	86	165	232	1090	517	642	500	302	153	143
30	100	110	80	160	---	804	1130	491	463	280	143	146
31	103	---	98	170	---	712	---	437	---	262	140	---
TOTAL	2994	3531	2854	4113	8604	16787	38702	24373	49568	11856	5692	4232
MEAN	96.6	118	92.1	133	297	542	1290	786	1662	382	184	141
MAX	128	160	130	170	995	2430	4230	2710	6780	1020	249	152
MIN	87	100	64	80	130	130	454	345	329	228	140	128
AC-FT	5940	7000	5660	8160	17070	33300	76770	48340	98910	23520	11290	8390

CAL YR 1983	TOTAL	95175	MEAN	261	MAX	2280	MIN	64	AC-FT	188800
WTR YR 1984	TOTAL	173606	MEAN	474	MAX	6780	MIN	64	AC-FT	344300

06799450 LOGAN CREEK AT PENDER, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-68, 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
OCT											
18...	1215	103	558	8.1	10.5	10.2	18	960	1400	420	120
NOV											
08...	1440	102	880	8.3	8.5	9.7	16	K440	1100	400	110
DEC											
29...	1230	85	914	7.4	.0	8.8	19	2800	3200	420	120
JAN											
09...	1400	114	840	7.8	.0	9.4	16	2800	K60000	400	110
31...	1545	171	760	7.5	.0	12.0	37	K6300	K30000	310	89
MAR											
21...	1430	260	880	8.6	2.0	11.0	37	6900	8500	430	120
APR											
24...	1200	715	910	7.8	11.5	9.7	66	2500	1300	440	120
MAY											
08...	1100	904	920	7.7	9.0	9.5	53	--	--	360	100
JUN											
12...	1720	5920	305	7.3	19.0	6.5	330	K140000	>100000	120	34
JUL											
25...	1245	225	890	7.6	20.0	8.2	25	K490	K2200	460	130
AUG											
14...	1230	162	883	7.8	23.5	9.0	30	480	340	430	120
SEP											
05...	1700	144	925	7.9	20.0	4.9	50	250	K160	430	120

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
18...	30	150	12	67	3.3	.070	1.5	1.6	4.9	.340	3.5
NOV											
08...	30	140	9.7	74	3.4	.070	1.2	1.3	4.7	.230	3.9
DEC											
29...	30	150	12	40	4.1	.300	.80	1.1	5.2	.160	2.9
JAN											
09...	31	140	11	42	3.8	.610	.49	1.1	4.9	.260	3.6
31...	22	100	12	116	3.2	.700	1.8	2.5	5.7	.470	8.8
MAR											
21...	32	150	11	322	5.9	.240	1.2	1.4	7.3	.530	8.2
APR											
24...	33	170	9.4	470	7.2	.130	1.4	1.5	8.7	.650	11
MAY											
08...	27	130	8.2	670	5.6	.160	4.3	4.5	10	.140	16
JUN											
12...	7.9	31	3.2	3720	2.1	.140	14	14	16	3.20	120
JUL											
25...	33	160	7.4	103	4.9	.050	1.3	1.3	6.2	.420	6.6
AUG											
14...	31	150	7.9	101	3.7	.030	.97	1.0	4.7	.240	4.5
SEP											
05...	32	150	10	87	3.1	.040	1.1	1.1	4.2	.220	3.5

06799450 LOGAN CREEK AT PENDER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
NOV 08...	1440	96	28	.6	6.9	303	.30	23	530	.72
JAN 31...	1545	64	20	.5	8.0	249	.30	18	420	.57
MAY 08...	1100	86	24	.6	10	275	.30	13	480	.65
AUG 14...	1230	129	27	.6	6.4	299	.30	21	540	.74

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
NOV 08...	146	3.5	.130	4	100	80	2	<10	10	2600
JAN 31...	193	3.2	.220	--	--	60	--	--	--	--
MAY 08...	1170	5.6	.120	6	400	50	<1	30	26	21000
AUG 14...	237	3.4	.110	--	--	80	--	--	--	--

DATE	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV 08...	2600	6	4	250	190	59	<.1	13	<1	20
JAN 31...	--	19	--	--	--	140	--	--	--	--
MAY 08...	21000	11	17	790	770	18	.2	10	<1	140
AUG 14...	--	6	--	--	--	31	--	--	--	--

06799500 LOGAN CREEK NEAR UEHLING, NE

LOCATION.--Lat 41°42'50", long 96°31'15", on south line of SE1/4SE1/4 sec.9, T.20 N., R.8 E., Dodge County, Hydrologic Unit 10220004, near right bank on downstream side of bridge on county road, 2 mi southwest of Uehling and 8 mi upstream from mouth.

DRAINAGE AREA.--1,030 mi^2, approximately.

PERIOD OF RECORD.--March 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,208.73 ft National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to July 15, 1963.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--43 years, 195 ft^3/s, 141,300 acre-ft/yr; median of yearly mean discharges, 164 ft^3/s, 119,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,200 ft^3/s Feb. 20, 1971, gage height, 20.15 ft, from floodmark; maximum gage height, 20.15 ft, Mar. 27, 1962, present datum, Feb. 20, 1971; minimum daily discharge, 6.1 ft^3/s July 26, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 5, 1940, reached a stage of 20.6 ft, present datum, from floodmarks, discharge, 22,200 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
a	----	ice jam	ice jam	May 22	0730	2780	8.08
Mar. 26	1030	2500	7.93	May 28	2200	1540	6.72
Apr. 3	2230	4100	10.32	June 8	0600	3850	10.82
Apr. 8	2000	3360	9.19	June 13	0230	9900	17.37
Apr. 12	1800	5880	12.88	June 15	0230	9190	16.81
Apr. 22	1830	3100	8.69	June 16	1100	*10900	17.95
Apr. 27	0500	2160	7.21	June 18	0400	9430	17.02
May 1	1300	3610	9.48	June 21	0330	8220	15.91
May 7	1530	3240	8.87	June 22	1830	9330	16.94
May 18	1400	2840	8.20	June 23	2400	4630	11.91

a Sometime during period Feb. 2-22

Minimum daily discharge, 84 ft^3/s Dec. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	153	150	170	300	315	867	3190	614	615	304	164
2	154	154	155	175	300	302	959	2630	590	579	286	165
3	158	161	155	200	305	292	3050	2030	518	554	269	167
4	149	165	160	220	290	331	2880	1680	542	553	255	166
5	150	160	170	240	250	367	1280	2000	574	602	267	166
6	143	162	145	220	290	340	1060	1840	537	525	263	170
7	139	160	140	210	300	317	1040	2890	600	489	244	171
8	133	158	140	200	325	300	2800	1930	2760	462	235	173
9	129	185	140	200	340	280	2280	1310	1280	450	224	173
10	131	213	150	190	360	260	1320	1110	1020	459	216	176
11	139	209	140	200	390	320	1430	1000	1040	470	211	185
12	133	194	130	190	430	350	5040	1010	4140	473	205	187
13	130	202	130	180	520	370	3630	958	5940	416	197	187
14	128	204	130	185	640	400	1990	910	2250	383	194	188
15	127	197	120	190	760	520	1630	705	6560	375	191	187
16	125	193	98	180	1140	557	1390	672	8970	373	190	188
17	130	180	100	165	860	507	1080	636	8200	414	190	189
18	132	171	88	150	680	438	917	1730	7130	670	189	185
19	202	196	90	155	330	370	803	2270	2490	452	187	176
20	202	216	92	130	340	334	726	1420	2890	440	182	169
21	198	246	88	160	350	340	1130	857	5020	510	198	167
22	179	214	84	170	370	729	2800	1980	6660	396	209	166
23	167	190	86	175	398	969	2370	996	4320	345	222	168
24	160	174	88	185	486	1210	1410	691	2580	319	204	163
25	155	174	94	200	484	1450	1120	1150	1530	309	198	173
26	151	177	116	210	532	2090	1290	1310	1130	367	196	168
27	152	220	106	215	385	2020	1890	868	914	1180	197	172
28	150	218	100	225	331	1750	1250	1300	787	531	194	174
29	147	190	98	240	309	1330	1070	1290	732	388	181	176
30	147	170	96	240	---	998	1750	841	669	350	176	175
31	148	---	130	310	---	910	---	691	---	325	168	---
TOTAL	4664	5606	3709	6080	12795	21066	52252	43915	82987	14774	6642	5239
MEAN	150	187	120	196	441	680	1742	1417	2766	477	214	175
MAX	202	246	170	310	1140	2090	5040	3190	8970	1180	304	189
MIN	125	153	84	130	250	260	726	636	518	309	168	164
AC-FT	9250	11120	7360	12060	25380	41780	103600	87110	164600	29300	13170	10390

CAL YR 1983	TOTAL	160446	MEAN	440	MAX	4420	MIN	84	AC-FT	318200
WTR YR 1984	TOTAL	259729	MEAN	710	MAX	8970	MIN	84	AC-FT	515200

06800000 MAPLE CREEK NEAR NICKERSON, NE

LOCATION.--Lat 41°32'44", long 96°30'09", in NE1/4SW1/4 sec.10, T.18 N., R.8 E., Dodge County, Hydrologic Unit 10220003, on right bank 120 ft upstream from bridge on U.S. Highways 77 and 275, 1.5 mi northwest of Nickerson, and 4 mi upstream from mouth.

DRAINAGE AREA.--450 mi², approximately.

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1630: 1957-58.

GAGE.--Water-stage recorder. Datum of gage is 1,194.56 ft National Geodetic Vertical Datum of 1929. Prior to July 28, 1960, nonrecording gage at site 120 ft downstream at present datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--33 years, 65.2 ft³/s, 47,240 acre-ft/yr; median of yearly mean discharges, 52 ft³/s, 37,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s June 21, 1960, gage height, 14.67 ft; maximum gage height, 16.54 ft June 18, 1983; minimum daily discharge, 0.1 ft³/s Jan. 15, 16, 1956, Aug. 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known since 1944, 35,000 ft³/s June 11, 1944, from indirect measurement of peak flow; gage height, 16.28 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 23	0730	1010	9.12	May 19	0400	3900	15.45
Mar. 27	0330	1180	9.56	May 22	1330	2970	b13.61
Apr. 3	1400	3240	14.13	c	----	unknown	unknown
Apr. 7	2300	2150	11.82	June 14	0200	5380	16.90
Apr. 12	1130	2010	11.55	June 15	0130	2710	13.21
Apr. 22	0230	1730	10.96	June 17	1300	*6430	b17.65
a	----	unknown	unknown	June 23	2030	2420	12.67
May 7	0530	3300	14.25				

a Sometime during period Apr. 29 to May 1. b From floodmark c Sometime during period May 24 to June 13.
Minimum daily discharge, 23 ft³/s Oct. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	41	50	62	170	141	251	1100	240	203	105	54
2	31	43	52	60	170	154	324	750	300	199	101	54
3	34	45	52	62	175	144	2600	798	240	193	99	50
4	37	97	54	60	160	268	1030	610	230	195	95	48
5	31	69	58	64	120	350	532	691	220	227	95	48
6	27	44	52	62	150	230	403	692	210	439	98	47
7	25	41	50	60	155	177	658	1950	200	272	92	46
8	23	40	52	60	165	79	1330	577	200	185	88	46
9	23	44	46	58	175	53	704	406	220	169	86	43
10	25	90	54	52	170	50	456	377	250	162	80	43
11	111	82	47	54	160	80	437	384	500	164	75	43
12	53	54	45	50	155	110	1340	377	1500	148	74	43
13	31	52	48	47	150	128	600	349	4000	135	74	43
14	27	56	45	50	160	142	493	298	2610	125	71	42
15	27	54	42	52	165	467	396	247	1200	118	65	41
16	27	49	36	50	170	367	348	253	3380	116	67	41
17	27	44	37	48	175	187	303	241	6030	187	66	40
18	28	43	33	45	210	150	275	902	3040	195	65	39
19	43	49	35	47	90	130	254	2400	640	126	65	39
20	89	137	37	45	39	100	236	704	378	140	65	39
21	86	111	30	50	53	237	394	489	324	130	67	38
22	54	67	33	60	125	568	1290	1650	291	120	119	38
23	46	56	35	80	150	742	607	629	917	115	83	38
24	44	46	34	100	160	533	433	400	768	110	66	37
25	40	51	40	125	197	663	359	450	322	111	67	40
26	39	57	52	120	211	689	305	500	304	223	65	39
27	39	80	54	125	182	881	300	360	274	273	65	39
28	40	74	50	140	127	478	259	430	241	148	64	40
29	38	64	48	175	119	392	280	330	228	124	62	43
30	37	54	45	170	---	303	500	300	210	114	60	43
31	37	---	54	175	---	271	---	250	---	109	56	---
TOTAL	1254	1834	1400	2408	4408	9264	17697	19894	29467	5275	2402	1284
MEAN	40.5	61.1	45.2	77.7	152	299	590	642	982	170	77.5	42.8
MAX	111	137	58	175	211	881	2600	2400	6030	439	119	54
MIN	23	40	30	45	39	50	236	241	200	109	56	37
AC-FT	2490	3640	2780	4780	8740	18380	35100	39460	58450	10460	4760	2550

CAL YR 1983 TOTAL 60834 MEAN 167 MAX 4010 MIN 13 AC-FT 120700
WTR YR 1984 TOTAL 96587 MEAN 264 MAX 6030 MIN 23 AC-FT 191600

06800500 ELKHORN RIVER AT WATERLOO, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°17'25", long 96°17'05", in SW1/4 sec.3, T.15 N., R.10 E., Douglas County, Hydrologic Unit 10220003, on right bank 100 ft upstream from bridge at north edge of Waterloo and 3.5 mi downstream from Rawhide Creek.

DRAINAGE AREA.--6,900 mi^2, approximately, of which about 5,870 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1899 to November 1903, May 1911 to September 1915, August 1928 to current year. Published as "at Arlington" 1899-1903, July 1913 to September 1915. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1914(M), 1915, 1936, 1943(M). WDR NE-74: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,104.73 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1960, to June 28, 1978, at datum 2.00 ft higher. See WSP 1918 for history of changes prior to Oct. 1, 1960.

REMARKS.--Records good except those for winter period, which are poor. Some small diversions above station for irrigation.

AVERAGE DISCHARGE.--64 years, 1,182 ft^3/s, 856,400 acre-ft/yr; median of yearly mean discharges, 1,010 ft^3/s, 731,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100,000 ft^3/s June 12, 1944, gage height, 16.6 ft from floodmark in gage well, site and datum then in use, from rating curve extended above 22,000 ft^3/s on basis of current-meter measurement of peak flow in main channel and velocity-area studies of overflow section; minimum observed, 50 ft^3/s Nov. 12, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Stage and discharge of the flood of June 12, 1944, are the greatest known since at least 1880.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	----	7500	ice jam
Mar. 27	0700	12100	9.52
Apr. 4	1100	15800	10.92
Apr. 13	1900	19200	12.02
Apr. 23	0430	13200	9.68
Apr. 27	1400	9440	8.00
May 1	2000	12700	9.45
May 7	1600	15000	10.52
May 19	0930	14000	10.28
May 22	1300	11400	9.20
May 25	2400	7120	7.14
June 8	1500	10200	8.75
June 14	0200	25600	14.34
June 16	0200	26600	14.65
June 18	1330	*43100	18.12
June 21	1500	15500	10.83
June 24	1230	17400	11.55

Minimum daily discharge, 391 ft^3/s Nov. 29.

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	731	461	700	1980	2920	5740	11500	3450	3080	1350	850
2	952	768	717	700	2490	2950	5670	11700	3390	2890	1280	873
3	920	889	827	700	2990	2960	11800	11600	3260	2730	1200	835
4	968	904	896	720	3490	3080	15200	10200	3010	2650	1160	812
5	904	1000	952	730	3450	4290	11300	10100	3570	2700	1140	782
6	850	952	968	770	2700	3410	7970	9440	3140	2730	1190	789
7	797	928	1000	800	2380	3170	7270	13400	2850	2730	1150	789
8	769	928	1010	870	2180	2470	10600	13400	6710	2780	1090	789
9	731	1040	952	930	2230	1910	14100	10900	6880	2730	1050	775
10	746	1220	944	990	2640	1790	13600	8960	4660	2560	1000	782
11	968	1370	984	1040	3030	1950	12400	7310	6160	2420	928	805
12	1150	1270	968	1050	3190	1900	15800	6210	11500	2350	904	820
13	866	1190	1010	1010	3410	1840	18800	5550	22400	2220	889	812
14	790	1200	865	980	3260	2110	17100	5040	20700	2050	850	797
15	760	1200	850	920	4440	3930	13100	4560	21100	1940	797	789
16	753	1190	843	880	5020	4260	11700	4100	24600	1850	775	768
17	731	1150	775	900	6100	3780	10500	3720	31300	1800	753	768
18	740	1140	790	870	4990	3830	9040	4650	41000	1980	753	768
19	858	1160	866	780	3420	3540	7670	12900	32100	2260	782	760
20	1210	1380	881	750	2530	3190	6660	9420	19600	1830	782	746
21	1380	1670	850	700	2220	3260	6710	5700	13500	1770	812	717
22	1260	1740	827	680	2530	4230	11200	7220	11300	1720	936	689
23	1120	1580	830	680	2370	6630	12700	6500	13800	1530	1050	682
24	1020	1430	810	690	3550	7360	10300	4170	15100	1480	1050	696
25	944	1290	790	710	3290	8140	8200	4850	9840	1330	1060	710
26	889	1280	770	800	3370	9760	7450	5980	7050	1400	1060	703
27	835	1170	750	750	3190	11600	8620	4710	5130	1750	1000	668
28	775	546	730	790	2950	10800	7790	4590	4140	2590	976	682
29	739	391	710	850	2860	9280	6490	4990	3750	1840	952	703
30	710	397	730	910	---	7320	8070	4300	3370	1690	928	717
31	710	---	750	900	---	6320	---	3900	---	1480	936	---
TOTAL	27865	33104	26106	25550	92250	143980	313550	231570	358360	66860	30583	22876
MEAN	899	1103	842	824	3181	4645	10450	7470	11950	2157	987	763
MAX	1380	1740	1010	1050	6100	11600	18800	13400	41000	3080	1350	873
MIN	710	391	461	680	1980	1790	5670	3720	2850	1330	753	668
AC-FT	55270	65660	51780	50680	183000	285600	621900	459300	710800	132600	60660	45370

CAL YR 1983 TOTAL 943626 MEAN 2585 MAX 16600 MIN 391 AC-FT 1872000
WTR YR 1984 TOTAL 1372654 MEAN 3750 MAX 41000 MIN 391 AC-FT 2723000

PLATTE RIVER BASIN

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1966 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1977 to September 1981.
WATER TEMPERATURES: November 1977 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 750 micromhos Jan. 10, 1979; minimum daily, 235 micromhos Mar. 15, 1979.
WATER TEMPERATURES: Maximum, 36.0°C Aug. 19, 1979; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT											
11...	1315	977	600	7.8	11.5	735	--	9.0	45	14000	48000
NOV											
29...	1330	377	670	7.4	.5	740	27	15.3	16	K3600	4900
DEC											
13...	1100	999	675	8.2	.0	736	--	13.2	24	2000	4500
JAN											
18...	1400	864	560	7.5	.0	735	14	14.7	23	900	K13000
FEB											
15...	1045	2870	460	7.8	.0	--	--	13.5	46	2800	K25000
MAR											
14...	1200	2120	630	7.9	.0	737	140	14.3	47	K2000	6300
APR											
19...	1155	7550	510	7.7	13.5	738	--	11.1	92	1300	1100
MAY											
15...	1200	4610	594	7.3	17.0	745	120	7.8	52	670	10000
JUN											
28...	1200	4080	593	8.1	24.5	740	--	7.1	82	2200	16000
JUL											
10...	1240	2520	620	7.6	26.0	737	330	7.4	89	3900	20000
AUG											
14...	1245	916	476	8.3	27.0	745	--	17.6	220	K400	700
SEP											
10...	1150	791	578	7.9	22.0	740	24	9.2	30	160	2700

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT										
11...	250	--	66	20	33	.9	--	--	53	28
NOV										
29...	300	39	88	20	28	.7	8.5	264	67	16
DEC										
13...	320	--	92	21	26	.7	--	--	60	14
JAN										
18...	320	31	93	21	26	.7	7.3	288	66	16
FEB										
15...	200	--	59	14	17	.5	--	--	44	9.3
MAR										
14...	270	13	80	18	22	.6	7.7	262	55	12
APR										
19...	210	--	60	14	21	.7	--	--	54	9.5
MAY										
15...	240	9	67	17	21	.6	9.2	229	65	10
JUN										
28...	270	--	90	15	20	.5	--	--	60	8.5
JUL										
10...	290	45	84	20	22	.6	9.3	248	64	8.9
AUG										
14...	200	--	49	20	25	.8	--	--	70	13
SEP										
10...	230	28	57	21	26	.8	7.4	201	73	14

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 11...	--	--	--	--	--	--	107	--	--	1.9
NOV 29...	.30	28	430	420	.58	438	82	3.8	.040	3.8
DEC 13...	--	--	--	--	--	--	32	--	--	3.9
JAN 18...	.30	35	453	440	.62	1060	30	3.6	.030	3.6
FEB 15...	--	--	--	--	--	--	270	--	--	3.0
MAR 14...	.30	26	376	380	.51	2150	441	3.1	.070	3.2
APR 19...	--	--	--	--	--	--	1100	--	--	2.5
MAY 15...	.40	16	368	340	.50	4580	542	3.4	.060	3.5
JUN 28...	--	--	--	--	--	--	760	--	--	4.2
JUL 10...	.40	22	407	380	.55	2770	1190	5.0	.040	5.0
AUG 14...	--	--	--	--	--	--	103	--	--	.90
SEP 10...	.30	15	352	330	.48	752	88	1.3	.040	1.3

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 11...	--	.020	--	2.8	2.8	4.7	.500	--	--	7.9
NOV 29...	3.8	.350	.360	1.6	1.9	5.7	.490	.390	.330	4.9
DEC 13...	--	.220	--	1.3	1.5	5.4	.300	--	--	3.9
JAN 18...	3.9	.530	.610	.77	1.3	4.9	.360	.300	.290	4.2
FEB 15...	--	.800	--	2.5	3.3	6.3	.650	--	--	15
MAR 14...	3.4	.390	.400	2.6	3.0	6.2	.660	.220	.190	9.5
APR 19...	--	.290	--	4.7	5.0	7.5	1.50	--	--	30
MAY 15...	4.2	.080	.060	1.9	2.0	5.5	.600	.290	.120	14
JUN 28...	--	.050	--	.35	.40	4.6	.850	--	--	24
JUL 10...	4.9	.030	.040	6.5	6.5	12	1.10	.230	.240	24
AUG 14...	--	.060	--	2.7	2.8	3.7	.340	--	--	15
SEP 10...	1.3	.020	.120	1.9	1.9	3.2	.280	.080	.090	7.2

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)
NOV 29...	1330	<10	4	4	200	210	--	<.5	<1	<1	<10	<1
MAR 14...	1200	30	6	3	400	180	--	<.5	<1	<1	20	<1
MAY 15...	1200	40	5	3	<100	170	<100	<1.0	<1	1	30	<1
JUL 10...	1240	<10	8	5	620	210	--	<1.0	<1	<1	50	<1

DATE	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)
NOV 29...	<3	10	2	2600	8	10	1	34	290	150	.1
MAR 14...	<3	22	6	11000	22	30	<1	25	510	21	.6
MAY 15...	<3	31	4	14000	23	19	1	30	670	5	.1
JUL 10...	<3	47	6	41000	9	21	1	26	1500	3	<.1

DATE	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	ZINC, DISSOLVED (UG/L AS ZN) (01090)
NOV 29...	<.1	<10	11	6	6	<1	<1	430	<6	30	5
MAR 14...	<.1	<10	5	5	7	<1	<1	380	<6	80	15
MAY 15...	<.1	<10	2	8	7	<1	<1	340	<6	70	12
JUL 10...	<.1	<10	3	7	7	<1	<1	410	6	150	16

800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	TEMPERATURE (DEG C) (00010)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)
NOV								
29...	1330	377	.5	223	227	--	--	--
JAN								
18...	1400	864	.0	112	261	--	--	--
MAR								
14...	1200	2120	.0	990	5670	20	21	25
MAY								
15...	1200	4610	17.0	1130	14100	24	27	30
JUL								
10...	1240	2520	26.0	1740	11800	52	56	63
SEP								
10...	1150	791	22.0	1390	2970	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV							
29...	--	53	60	100	--	--	--
JAN							
18...	--	--	--	--	--	--	79
MAR							
14...	26	52	67	97	99	100	--
MAY							
15...	36	66	80	98	100	--	--
JUL							
10...	66	75	80	84	94	98	--
SEP							
10...	--	14	18	72	97	100	--

06803000 SALT CREEK AT ROCA, NE

LOCATION.--Lat 40°39'29", long 96°39'55", in NW1/4SW1/4 sec.17, T.8 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, on left bank 15 ft downstream from highway bridge at west edge of Roca.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WDR NE-71: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,192.50 ft National Geodetic Vertical Datum of 1929, Kansas City supplementary adjustment of 1943. Prior to May 16, 1956, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for winter period and periods of backwater from beaver dams, which are poor. Flood flow affected by several detention dams.

AVERAGE DISCHARGE.--33 years, 45.3 ft³/s, 32,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft³/s July 10, 1958, gage height, 22.70 ft; minimum daily, 0.2 ft³/s July 23, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 8, 1950, reached a stage of 26.0 ft, from floodmark established by Corps of Engineers, discharge, 67,000 ft³/s, but may have been exceeded by flood of July 5, 1908.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 2	1945	1800	13.94	May 22	1345	1340	12.15
Apr. 21	1515	1860	14.12	June 13	unknown	*5520	a*20.30
Apr. 30	0130	898	10.09	June 16	unknown	b3000	unknown
May 19	1300	2580	16.37	July 4	1030	4640	19.65

a From floodmark

b Hydrographic comparison with Salt Creek at Lincoln.

Minimum daily discharge, 3.0 ft³/s Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	9.0	7.5	10	201	18	60	257	111	38	14	8.4
2	3.0	9.2	7.2	10	306	18	765	190	116	32	14	49
3	3.0	12	7.2	11	238	17	1090	250	88	28	12	17
4	3.7	12	7.5	11	192	24	421	220	87	2580	13	8.4
5	4.0	11	7.4	12	137	24	306	176	188	1050	13	7.2
6	3.9	11	7.1	11	111	20	244	156	170	601	12	6.8
7	3.6	11	6.9	9.7	58	18	198	166	140	481	12	6.2
8	3.8	11	6.9	9.1	48	17	186	129	110	392	11	6.1
9	3.9	22	6.7	8.2	70	19	173	110	400	326	10	6.9
10	4.0	20	7.1	7.1	68	19	150	97	340	279	10	6.5
11	6.0	12	7.1	8.1	73	20	156	83	220	239	9.4	6.5
12	5.5	10	6.7	8.1	90	17	343	72	1500	197	9.1	6.9
13	4.7	9.7	6.6	7.4	47	20	237	68	4000	161	9.5	6.9
14	4.1	9.3	6.4	7.0	32	24	200	66	2500	132	8.9	6.6
15	4.4	8.8	6.4	6.8	29	29	160	64	1800	110	8.9	6.6
16	4.5	8.8	6.4	6.8	30	24	115	64	2500	93	8.2	6.8
17	4.3	8.3	6.2	6.8	27	32	109	80	1500	98	7.3	6.4
18	4.9	8.5	5.8	6.8	27	43	98	86	735	70	9.7	6.4
19	6.3	8.8	6.4	6.6	36	32	78	1700	629	57	12	7.3
20	5.8	8.9	6.6	6.6	31	47	78	877	581	48	9.3	7.2
21	6.6	8.3	6.6	6.8	32	73	1090	473	492	42	20	6.9
22	6.4	9.0	6.2	7.2	31	151	1000	963	416	34	15	6.6
23	6.6	8.0	6.6	8.4	28	123	740	529	362	28	10	6.3
24	6.2	8.0	6.8	9.4	23	98	450	346	274	24	9.2	6.7
25	6.4	7.7	7.2	10	22	86	300	325	221	23	9.2	6.5
26	7.0	9.2	7.4	11	23	154	182	249	174	20	9.0	6.2
27	6.6	9.4	7.6	14	21	223	155	198	119	85	8.1	6.3
28	6.7	8.8	7.8	16	18	134	116	170	84	27	7.8	6.4
29	7.5	8.4	8.0	20	20	117	273	143	64	16	7.9	6.3
30	8.4	7.5	9.0	35	---	84	549	124	48	15	7.2	6.4
31	9.1	---	10	74	---	69	---	110	---	14	6.7	---
TOTAL	164.6	305.6	219.3	381.9	2069	1794	10022	8541	19969	7340	323.4	254.7
MEAN	5.31	10.2	7.07	12.3	71.3	57.9	334	276	666	237	10.4	8.49
MAX	9.1	22	10	74	306	223	1090	1700	4000	2580	20	49
MIN	3.0	7.5	5.8	6.6	18	17	60	64	48	14	6.7	6.1
AC-FT	326	606	435	757	4100	3560	19880	16940	39610	14560	641	505

CAL YR 1983 TOTAL 18991.4 MEAN 52.0 MAX 742 MIN 2.1 AC-FT 37670
WTR YR 1984 TOTAL 51384.5 MEAN 140 MAX 4000 MIN 3.0 AC-FT 101900

06803500 SALT CREEK AT LINCOLN, NE

LOCATION.--Lat 40°50'49", long 96°40'54", in NW1/4SW1/4 sec.7, T.10 N., R.7 E., Lancaster County, Hydrologic Unit 10200203 on right bank 135 ft downstream from bridge on North 27th Street at north edge of Lincoln, 1 mi downstream from Oak Creek.

DRAINAGE AREA.--684 mi^2.

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WDR NE-71: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,113.90 ft National Geodetic Vertical Datum of 1929. Prior to July 27, 1979, water-stage recorder for stages above 6.2 ft on downstream side of bridge pier, 135 ft upstream at same datum, and nonrecording gage read twice daily.

REMARKS.--Records good. Flood flow affected by several detention dams.

AVERAGE DISCHARGE.--35 years, 222 ft^3/s, 160,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28 200 ft^3/s June 2, 1951, gage height, 26.15 ft; minimum daily, 21 ft^3/s July 10, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1951, may have been equaled or exceeded in discharge by flood of July 6, 1908, which reached a stage of 33.6 ft. Channel changes since 1908 have materially altered the stage-discharge relation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 3	0800	5740	12.65	May 22	0800	11200	17.77
Apr. 12	0330	3830	10.44	June 9	1530	4640	11.42
Apr. 21	1930	6390	13.34	June 13	0530	*15600	20.92
Apr. 30	0330	2940	9.26	June 16	1200	8050	14.98
May 19	0700	9840	16.60	July 4	1630	6260	13.20

Minimum daily discharge, 86 ft^3/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	95	142	118	569	248	427	1250	592	432	161	111
2	98	95	142	122	694	245	1980	1020	899	411	160	258
3	95	296	135	126	569	240	4760	1730	692	391	157	162
4	127	227	133	132	495	361	2070	1560	656	3420	173	137
5	98	141	134	147	348	334	1320	1530	1170	3130	162	122
6	97	150	136	156	287	282	1050	1130	1000	1220	163	117
7	95	125	133	157	304	268	885	1160	737	941	159	113
8	94	134	130	152	269	238	839	952	608	759	152	116
9	92	358	132	147	267	221	799	819	2950	636	160	108
10	122	278	130	138	283	241	712	750	2630	540	144	104
11	282	186	131	132	292	258	893	688	1340	477	135	103
12	175	158	130	137	308	232	2480	620	5570	424	131	103
13	116	152	132	128	294	281	1080	575	13000	369	131	103
14	103	146	124	123	274	290	832	523	6670	323	132	101
15	118	138	127	126	280	303	749	520	3740	292	127	95
16	130	133	129	124	332	279	651	524	5520	272	122	89
17	133	132	127	126	298	319	572	685	3970	284	117	87
18	116	131	122	122	277	309	559	711	2580	268	115	87
19	132	137	121	118	307	257	500	6800	1890	247	113	90
20	106	137	118	116	297	325	459	2920	1870	238	115	91
21	103	133	119	114	291	431	3470	1610	1500	223	271	91
22	100	130	121	116	315	596	3720	6940	1520	210	160	89
23	101	130	123	120	374	553	1810	2610	1390	202	137	87
24	99	123	123	123	331	488	1270	1690	1010	194	117	99
25	97	119	114	134	299	470	1020	1700	861	181	118	95
26	95	123	116	149	306	914	899	1220	750	175	113	94
27	93	105	120	153	292	1270	792	1020	651	171	117	90
28	90	104	122	229	273	759	675	923	574	206	119	88
29	98	151	122	545	250	611	1170	808	519	160	111	88
30	99	156	121	836	---	521	2500	721	471	151	111	86
31	92	---	121	584	---	458	---	649	---	154	109	---
TOTAL	3518	4623	3930	5750	9775	12602	40943	46358	67330	17101	4312	3204
MEAN	113	154	127	185	337	407	1365	1495	2244	552	139	107
MAX	282	358	142	836	694	1270	4760	6940	13000	3420	271	258
MIN	90	95	114	114	250	221	427	520	471	151	109	86
AC-FT	6980	9170	7800	11410	19390	25000	81210	91950	133500	33920	8550	6360

CAL YR 1983	TOTAL	149345	MEAN	409	MAX	5030	MIN	83	AC-FT	296200
WTR YR 1984	TOTAL	219446	MEAN	600	MAX	13000	MIN	86	AC-FT	435300

06803510 LITTLE SALT CREEK NEAR LINCOLN, NE

LOCATION.--Lat 40°53'36", long 96°40'52", in NW1/4SW1/4 sec.30, T.11 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, on left bank 10 ft downstream from county road bridge and 0.4 mi north of intersection of Interstate Highway 80 and North 27th Street north of Lincoln.

DRAINAGE AREA.--43.6 mi².

PERIOD OF RECORD.--January 1969 to current year.

REVISED RECORDS.--WDR NE-77-1: 1969-73(M).

GAGE.--Water-stage recorder. Datum of gage is 1,114.73 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 10, 1980, water-stage recorder at present site and datum 3.00 ft higher.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--15 years, 13.8 ft³/s, 10,000 acre-ft/yr; median of yearly mean discharges, 12 ft³/s, 8,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft³/s June 12, 1984, gage height, 16.20 ft from rating curve extended above 1,400 ft³/s on basis of slope-area measurement; maximum gage height, 16.38 ft Oct. 11, 1973, backwater from Salt Creek, current datum, minimum daily discharge, 0.20 ft³/s Sept. 29, 30, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 3	1300	628	9.12	May 22	0430	2380	12.97
Apr. 11	2300	968	10.36	June 12	2300	*7500	16.20
Apr. 12	1200	914	10.20	June 16	0900	807	9.84
May 19	0200	1220	11.04				

Minimum daily discharge, 3.7 ft³/s Aug. 28, 29, Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	6.4	6.6	6.4	15	13	22	45	25	13	5.1	4.8
2	4.2	6.1	7.0	6.2	20	13	140	44	80	12	5.1	6.4
3	4.4	122	7.0	6.2	15	13	167	121	31	12	5.3	5.0
4	5.2	16	6.8	6.4	13	23	45	113	33	34	4.9	4.6
5	5.1	8.7	7.2	6.6	12	16	32	61	159	16	4.8	4.4
6	4.8	7.6	8.6	6.6	13	14	28	54	33	13	4.7	4.4
7	4.8	7.3	7.4	6.4	13	14	26	52	26	11	4.6	4.3
8	4.9	7.1	7.2	6.8	12	14	29	39	21	9.9	4.5	4.3
9	5.1	22	7.0	6.8	15	15	28	33	52	9.0	4.4	4.5
10	5.9	13	6.8	7.0	16	15	25	32	29	8.5	4.4	4.5
11	9.0	8.4	6.6	7.2	16	16	114	29	24	8.0	4.3	4.3
12	6.1	8.3	7.0	7.4	15	15	210	27	1210	7.9	4.2	4.1
13	5.7	8.3	6.9	7.2	12	18	41	26	2820	7.3	4.2	3.9
14	5.7	7.8	7.2	6.8	13	24	33	25	128	7.0	4.1	3.8
15	5.6	7.1	6.8	6.8	15	22	30	25	82	6.8	4.1	3.8
16	5.6	6.9	6.6	6.6	19	17	27	24	269	6.9	4.0	4.0
17	5.5	7.1	6.8	7.0	13	18	26	24	81	7.4	4.0	4.0
18	5.6	7.2	6.8	6.8	13	19	26	40	45	7.0	3.9	3.8
19	6.1	7.8	6.6	6.4	14	15	25	501	34	6.7	3.9	3.9
20	6.4	7.9	6.8	6.2	13	19	25	61	29	6.7	4.0	4.0
21	5.8	7.2	7.0	6.4	15	32	323	43	27	6.3	18	3.9
22	5.6	6.9	6.6	6.8	21	37	76	774	26	6.1	8.0	3.8
23	5.8	6.8	6.8	7.0	22	32	45	68	25	5.8	4.7	3.8
24	5.8	6.7	7.0	7.2	17	29	36	48	20	5.5	4.6	3.7
25	5.8	6.8	7.2	7.0	15	27	32	57	18	5.5	4.5	3.9
26	6.0	7.1	7.0	7.4	14	89	30	40	17	5.8	4.3	4.1
27	6.4	7.8	7.0	7.6	14	51	29	38	15	5.9	3.8	4.1
28	6.0	8.2	7.2	8.0	13	32	26	35	14	6.0	3.7	4.4
29	6.2	7.4	6.8	8.2	13	27	131	30	13	5.8	3.7	4.9
30	6.4	7.0	6.4	9.0	---	23	94	29	13	5.7	4.2	5.6
31	6.0	---	6.5	10	---	22	---	27	---	5.1	4.2	---
TOTAL	176.1	364.9	215.3	218.4	431	734	1921	2565	5399	273.6	152.2	129.0
MEAN	5.68	12.2	6.95	7.05	14.9	23.7	64.0	82.7	180	8.83	4.91	4.30
MAX	9.0	122	8.6	10	22	89	323	774	2820	34	18	6.4
MIN	4.2	6.1	6.4	6.2	12	13	22	24	13	5.1	3.7	3.7
AC-FT	349	724	427	433	855	1460	3810	5090	10710	543	302	256

CAL YR 1983	TOTAL	6891.5	MEAN	18.9	MAX	384	MIN	2.7	AC-FT	13670
WTR YR 1984	TOTAL	12579.5	MEAN	34.4	MAX	2820	MIN	3.7	AC-FT	24950

06803520 STEVENS CREEK NEAR LINCOLN, NE

LOCATION.--Lat 40°51'25", long 96°35'42", in NW1/4NE1/4 sec.11, T.10 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, on left bank 20 ft upstream from county road bridge on Havelock Avenue and 1.6 mi east of 70th Street at east edge of Lincoln.

DRAINAGE AREA.--47.8 mi².

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,125.57 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--16 years, 16.8 ft³/s, 12,170 acre-ft/yr; median of yearly mean discharges, 14 ft³/s, 10,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,620 ft³/s June 13, 1984, gage height, 19.57 ft; no flow July 31, Aug. 2-4, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 3	0500	662	7.53	June 13	0330	*4620	19.57
Apr. 21	1530	1070	9.45	June 15	1100	895	8.67
May 19	0300	1870	12.39	June 16	1000	1360	10.60
May 22	1000	3040	15.82	June 17	1230	1140	9.72
June 9	0830	1430	10.85	July 4	1600	1740	11.95
June 12	1200	1480	11.05				

Minimum daily discharge, 1.4 ft³/s Jan. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.6	4.2	3.8	24	24	32	53	26	14	4.8	1.7
2	1.5	3.3	4.6	3.8	60	25	287	47	33	14	5.5	6.9
3	1.5	5.6	4.1	3.9	44	25	409	63	27	15	5.2	5.9
4	1.7	4.5	4.3	4.0	45	26	87	73	24	568	4.6	3.1
5	1.9	3.5	4.5	4.1	33	25	57	52	28	134	4.8	3.4
6	1.6	4.0	4.5	4.6	18	23	47	45	24	61	4.5	2.1
7	1.6	4.0	4.6	4.7	12	22	42	49	21	34	4.5	2.0
8	1.5	5.8	4.4	4.7	12	22	47	36	18	33	4.0	2.1
9	1.5	9.2	4.4	4.3	20	21	51	32	637	26	3.7	1.9
10	1.7	5.8	4.1	3.8	26	20	43	30	75	18	3.4	2.4
11	3.4	2.9	4.5	3.8	25	18	49	28	36	16	3.2	2.4
12	3.1	3.1	4.4	3.8	35	15	148	26	961	15	3.1	2.7
13	2.1	2.2	4.6	3.1	19	14	55	25	2200	13	3.1	2.4
14	1.9	2.5	4.3	2.5	19	20	45	22	210	10	2.9	2.4
15	1.9	2.1	4.3	2.7	22	25	43	22	614	9.1	2.8	2.9
16	2.0	2.7	4.0	3.0	25	17	37	26	824	10	2.6	2.5
17	2.2	3.7	3.7	2.5	19	21	33	26	551	14	2.7	2.3
18	1.7	3.4	3.7	2.1	16	29	31	31	150	12	2.2	2.5
19	2.0	3.6	3.7	1.8	23	20	28	972	76	9.8	2.4	2.5
20	2.3	3.5	4.0	1.4	22	26	27	101	58	8.9	2.4	2.3
21	2.1	3.3	3.6	1.4	23	36	425	52	45	7.9	5.0	2.4
22	2.2	2.9	3.6	1.7	25	64	151	1480	38	7.3	6.2	2.0
23	2.2	2.9	3.6	2.2	24	62	73	119	33	6.6	3.5	2.2
24	2.0	3.0	3.1	2.5	23	53	50	60	27	6.3	2.8	2.0
25	2.1	2.9	3.3	2.9	22	50	42	206	24	6.1	2.6	2.0
26	2.1	3.8	3.6	3.2	23	80	38	64	21	6.5	2.7	1.6
27	2.2	5.1	3.6	3.7	23	87	34	48	19	6.1	2.6	1.6
28	2.3	5.3	3.4	4.9	24	52	28	45	17	6.3	2.5	1.9
29	2.4	4.5	2.9	9.5	22	50	121	36	16	5.8	2.1	2.1
30	2.5	4.6	3.4	26	---	38	183	33	15	5.3	2.0	1.9
31	2.5	---	3.7	26	---	33	---	30	---	5.0	1.8	---
TOTAL	63.8	115.3	122.7	152.4	728	1043	2743	3932	6848	1104.0	106.2	76.1
MEAN	2.06	3.84	3.96	4.92	25.1	33.6	91.4	127	228	35.6	3.43	2.54
MAX	3.4	9.2	4.6	26	60	87	425	1480	2200	568	6.2	6.9
MIN	1.5	2.1	2.9	1.4	12	14	27	22	15	5.0	1.8	1.6
AC-FT	127	229	243	302	1440	2070	5440	7800	13580	2190	211	151

CAL YR 1983	TOTAL	11043.1	MEAN	30.3	MAX	1320	MIN	1.2	AC-FT 21900
WTR YR 1984	TOTAL	17034.5	MEAN	46.5	MAX	2200	MIN	1.4	AC-FT 33790

06803525 SALT CREEK BELOW STEVENS CREEK, NEAR WAVERLY, NE

LOCATION.--Lat 40°54'18", long 96°35'09", in NW1/4SW1/4 sec.24, T.11 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, at bridge 0.5 mi north of Interstate Highway 80 and 3 mi southwest of Waverly.

DRAINAGE AREA.--815 mi².

PERIOD OF RECORD.--Water year 1971 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT											
04...	1300	250	--	7.8	17.5	6.0	10000	48000	350	92	30
NOV											
01...	1130	110	--	7.9	14.5	7.1	K57	K140	410	110	33
DEC											
20...	1200	142	6000	7.7	.0	12.9	K21000	24000	410	110	32
JAN											
04...	1030	160	5400	7.7	2.0	11.0	K19000	8000	370	100	29
FEB											
07...	1030	360	2900	7.9	.0	11.2	12000	3200	290	78	23
MAR											
13...	1230	297	3550	7.7	4.5	13.0	K5500	1200	320	86	26
APR											
10...	1145	906	1570	7.8	8.0	10.1	K1400	1800	250	69	20
MAY											
08...	1430	1380	1440	8.0	12.5	14.8	270	K40	250	69	19
JUN											
05...	1345	2190	868	7.4	20.5	6.8	28000	94000	150	43	10
JUL											
10...	1230	642	1900	7.7	24.0	6.3	K220	1200	240	69	17
31...	1050	180	5000	7.9	23.0	7.1	K67	K83	350	92	28
AUG											
28...	1450	137	6900	--	29.5	10.0	K500	740	380	100	32

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)
OCT											
04...	360	1900	1.4	3.90	5.7	9.6	11	1.90	--	--	--
NOV											
01...	340	1900	1.8	4.20	8.8	13	15	2.60	5	300	1
DEC											
20...	280	1600	2.0	4.90	.10	5.0	7.0	1.80	--	--	--
JAN											
04...	260	1400	1.9	3.20	.80	4.0	5.9	1.20	--	--	--
FEB											
07...	160	630	1.7	1.40	1.3	2.7	4.4	.710	2	200	1
MAR											
13...	190	840	1.5	1.40	1.1	2.5	4.0	.970	--	--	--
APR											
10...	100	290	1.6	.780	1.2	2.0	3.6	.700	--	--	--
MAY											
08...	99	260	1.8	.490	3.5	4.0	5.8	1.20	4	300	2
JUN											
05...	49	140	1.9	.200	9.3	9.5	11	2.50	--	--	--
JUL											
10...	110	430	2.2	.380	.12	.50	2.7	.780	--	--	--
31...	270	1300	2.7	1.10	.80	1.9	4.6	1.60	6	<100	1
AUG											
28...	330	1800	2.1	1.70	1.3	3.0	5.1	1.90	6	100	2

06803525 SALT CREEK BELOW STEVENS CREEK, NEAR WAVERLY, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT										
04...	--	--	--	--	--	--	--	--	--	15
NOV										
01...	10	12	570	9	310	<.1	2	1	40	7.8
DEC										
20...	--	--	--	--	--	--	--	--	--	6.8
JAN										
04...	--	--	--	--	--	--	--	--	--	5.7
FEB										
07...	<10	7	2700	10	260	<.1	2	<1	30	5.4
MAR										
13...	--	--	--	--	--	--	--	--	--	6.2
APR										
10...	--	--	--	--	--	--	--	--	--	4.9
MAY										
08...	20	20	17000	8	550	.1	2	<1	70	12
JUN										
05...	--	--	--	--	--	--	--	--	--	120
JUL										
10...	--	--	--	--	--	--	--	--	--	14
31...	20	11	2500	1	230	.2	3	<1	30	6.8
AUG										
28...	20	6	490	3	950	.1	3	<1	20	6.5

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
OCT												
04...	1300	58	1400	34	15	296	.60	23	4000	5.4	2700	1.4
NOV												
01...	1130	33	1300	29	7.0	378	.80	26	4000	5.4	1180	1.8
DEC												
20...	1200	79	1000	22	12	329	.70	26	3300	4.4	1250	2.0
JAN												
04...	1030	54	1000	23	11	316	.60	23	3000	4.1	1300	1.9
FEB												
07...	1030	29	450	12	10	261	.40	17	1500	2.1	1480	1.7
MAR												
13...	1230	24	590	15	8.5	299	.50	5.9	1900	2.6	1540	1.5
APR												
10...	1145	12	220	6	7.9	243	.40	12	870	1.2	2120	1.8
MAY												
08...	1430	19	190	5	7.6	232	.40	12	800	1.1	2970	1.8
JUN												
05...	1345	37	120	4	7.1	112	.30	11	450	.61	2650	2.1
JUL												
10...	1230	49	310	9	7.8	194	.40	16	1100	1.5	1870	2.2
31...	1050	54	840	20	10	292	.60	22	2700	3.7	1330	2.4
AUG												
28...	1450	67	1300	30	14	315	.60	23	3800	5.2	1400	2.2

06803530 ROCK CREEK NEAR CERESCO, NE

LOCATION.--Lat 41°00'56", long 96°32'39", in NE1/4NE1/4 sec.17, T.12 N., R.8 E., Lancaster County, Hydrologic Unit 10200203, on right (revised) bank 20 (revised) ft downstream from bridge on east-west county road and 5.7 mi southeast of Ceresco.

DRAINAGE AREA.--119 mi².

PERIOD OF RECORD.--April 1970 to current year.

REVISED RECORDS.--WDR NE-76-1: 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 1,112.18 ft National Geodetic Vertical Datum of 1929. Prior to Feb. 6, 1980, at present site at datum 3.0 ft higher. July 14, 1981 to Feb. 29, 1984, on left bank 30 ft downstream from bridge at present datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--14 years, 34.6 ft³/s, 25,070 acre-ft/yr; median of yearly mean discharges, 30 f³/s, 21,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s June 15, 1982, gage height, 18.84 ft, present datum, from floodmark; minimum daily, 0.25 ft³/s July 13, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 3	1000	1160	a8.76	May 19	1300	860	a7.60
Apr. 12	0600	860	a7.60	May 22	1300	1570	a10.10
Apr. 22	1600	2250	a12.00	June 12	1600	*5800	b17.47
May 3	1500	1060	a8.40	June 16	1500	1390	9.53

a From estimated trace based on observer readings.

b From floodmark

Minimum daily discharge, 5.2 ft³/s Nov. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	9.5	11	12	140	40	125	88	38	30	13	8.4
2	7.0	9.1	11	12	130	40	518	90	244	30	14	13
3	7.8	28	11	12	110	42	1090	623	53	29	13	9.8
4	8.4	18	12	13	90	50	301	281	54	67	12	9.5
5	8.6	11	12	13	64	54	64	131	307	66	13	9.3
6	8.8	12	11	13	56	52	53	108	59	94	13	9.0
7	9.1	12	11	13	50	45	44	180	39	36	12	8.3
8	8.8	15	11	13	46	40	142	60	31	31	12	8.3
9	8.0	35	11	12	45	38	59	41	311	27	12	8.3
10	9.1	25	11	11	43	35	41	45	98	25	11	8.7
11	13	14	12	12	43	35	53	121	103	25	11	9.0
12	8.8	11	12	12	43	36	515	100	2280	23	11	9.7
13	8.4	12	12	12	41	45	98	35	994	22	10	8.6
14	8.2	12	12	12	39	52	74	31	246	20	10	8.7
15	8.4	12	12	12	66	74	52	30	201	20	9.1	7.9
16	8.4	12	12	12	104	30	44	31	760	19	8.6	7.9
17	8.4	11	12	11	60	36	33	30	217	23	8.7	8.3
18	8.2	12	12	10	45	31	34	53	131	20	9.5	8.1
19	8.0	11	12	10	52	20	26	432	83	17	10	8.7
20	15	11	12	10	42	32	25	106	71	17	9.4	8.2
21	10	10	12	10	44	52	1130	48	68	16	19	8.0
22	9.0	12	11	10	67	35	1840	873	62	16	15	8.2
23	8.8	12	12	11	101	113	109	190	57	15	10	8.5
24	8.9	15	11	11	100	132	62	56	47	15	9.1	9.4
25	8.9	12	11	12	55	122	50	137	44	15	9.9	8.8
26	8.8	12	11	13	44	391	50	47	41	15	10	8.5
27	8.8	5.2	11	15	39	238	33	50	47	15	9.7	9.4
28	9.2	5.4	11	17	45	71	29	47	35	15	9.0	9.5
29	8.8	8.8	11	20	35	169	166	41	33	14	8.7	9.3
30	9.9	10	11	120	---	137	221	38	32	14	8.4	9.1
31	9.1	---	12	150	---	130	---	35	---	14	8.0	---
TOTAL	278.2	395.0	356	626	1839	2417	7081	4178	6786	805	339.1	266.4
MEAN	8.97	13.2	11.5	20.2	63.4	78.0	236	135	226	26.0	10.9	8.88
MAX	15	35	12	150	140	391	1840	873	2280	94	19	13
MIN	7.0	5.2	11	10	35	20	25	30	31	14	8.0	7.9
AC-FT	552	783	706	1240	3650	4790	14050	8290	13460	1600	673	528

CAL YR 1983 TOTAL 18161.9 MEAN 49.8 MAX 1400 MIN 4.0 AC-FT 36020
WTR YR 1984 TOTAL 25366.7 MEAN 69.3 MAX 2280 MIN 5.2 AC-FT 50310

06803555 SALT CREEK AT GREENWOOD, NE

LOCATION.--Lat 40°57'56", long 96°27'01", at center of sec.31, T.12 N., R.9 E., Cass County, Hydrologic Unit 10200203, on right bank just downstream from county road bridge, 0.5 mi west of Greenwood.

DRAINAGE AREA.--1,051 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1951 to current year. Records furnished by Corps of Engineers prior to Oct. 1, 1972.

REVISED RECORDS.--WDR NE-71: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,068.14 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 5, 1964, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--32 years (water years 1953-84), 319 ft^3/s, 231,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,000 ft^3/s June 24, 1963, gage height, 23.46 ft; maximum gage height, 24.93 ft June 15, 1982; minimum daily discharge, 14 ft^3/s Jan. 10, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 27	0200	3140	7.27	May 22	1200	20400	19.03
Apr. 3	0600	8610	12.19	June 5	1400	3060	7.25
Apr. 12	0600	7880	11.65	June 9	1600	8050	11.89
Apr. 21	2100	11600	13.57	June 13	0600	*46800	26.50
Apr. 30	0300	6050	10.21	June 16	1600	15000	16.25
May 3	1600	3750	7.98	July 4	2100	8000	11.85
May 19	1000	16700	17.17				

Minimum daily discharge, 127 ft^3/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	148	280	185	893	345	623	1970	848	589	214	143
2	152	152	230	190	1270	342	2640	1510	1590	552	218	378
3	150	494	220	195	969	332	6980	2750	1060	528	212	193
4	229	577	220	200	893	485	3000	2000	1010	3310	219	188
5	187	240	230	210	450	462	1760	2040	2180	2480	213	158
6	164	232	220	220	560	379	1400	1750	1430	1860	202	149
7	160	210	200	225	540	348	1240	1880	1010	1220	204	144
8	157	197	190	220	500	297	1210	1490	829	995	214	167
9	155	508	200	210	520	303	1220	1380	4820	843	187	145
10	157	529	210	200	569	294	1110	1280	3710	710	174	138
11	384	316	190	200	552	339	1080	1200	1920	653	172	140
12	182	255	190	195	593	303	4850	1120	10600	590	164	143
13	187	249	190	200	500	342	1710	1040	37100	533	162	141
14	164	235	185	190	470	458	1260	928	11200	477	160	144
15	167	224	185	185	489	548	1150	863	5950	431	164	132
16	184	216	180	180	623	411	1020	908	10200	402	150	131
17	184	213	170	175	470	425	888	883	6510	427	146	132
18	182	210	180	175	444	436	834	1240	3960	396	139	133
19	200	216	170	170	466	386	772	10800	2560	371	134	136
20	189	224	170	170	481	404	693	4720	2330	353	141	135
21	179	213	170	180	462	632	4700	2300	2020	336	645	134
22	169	207	170	185	497	1090	5340	12200	1840	315	232	129
23	164	205	170	190	602	1010	2590	4290	2030	301	194	127
24	162	202	170	200	520	908	1790	2270	1280	287	152	151
25	162	205	165	220	444	809	1430	2960	1100	273	143	140
26	158	202	170	280	432	1460	1280	1850	970	269	139	142
27	155	216	175	350	411	2230	1220	1430	873	259	148	142
28	152	200	175	504	379	1240	1050	1360	767	274	152	141
29	152	360	175	898	348	1000	1530	1120	698	264	151	142
30	167	330	180	1310	---	800	4330	1010	636	224	148	144
31	157	---	180	923	---	684	---	918	---	219	145	---
TOTAL	5495	7985	5910	9135	16347	19502	60700	73460	123031	20741	5838	4562
MEAN	177	266	191	295	564	629	2023	2370	4101	669	188	152
MAX	384	577	280	1310	1270	2230	6980	12200	37100	3310	645	378
MIN	150	148	165	170	348	294	623	863	636	219	134	127
AC-FT	10900	15840	11720	18120	32420	38680	120400	145700	244000	41140	11580	9050

CAL YR 1983	TOTAL	229532	MEAN	629	MAX	9430	MIN	110	AC-FT	455300
WTR YR 1984	TOTAL	352706	MEAN	964	MAX	37100	MIN	127	AC-FT	699600

06803555 SALT CREEK AT GREENWOOD, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1971 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1980 to current year.
WATER TEMPERATURES: October 1980 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1971 to September 1976.

REMARKS.--Prior to July 1, 1971, sediment records were obtained by the U.S. Corps of Engineers.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 9,100 micromhos Sep. 22, 1981; minimum daily, 170 micromhos June 13, 1984.
WATER TEMPERATURES: Maximum, 36.0°C June 25, 1981; minimum, 0.0°C on many days during winter period.
SEDIMENT CONCENTRATIONS: Maximum daily, 15,900 mg/L May 18, 1974; minimum daily, 5 mg/L Oct. 9, 1971.
SEDIMENT LOADS: Maximum daily, 492,000 tons Oct. 11, 1973; minimum daily, 1.0 ton Oct. 9, 1971.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 7,140 micromhos Oct. 10; minimum daily, 170 micromhos June 13.
WATER TEMPERATURES: Maximum, 30.0°C on several days during summer period; minimun, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)
OCT										
04...	1020	156	--	8.0	17.5	7.2	--	1700	5400	330
NOV										
01...	1000	152	--	8.0	13.5	7.9	50	200	K320	400
DEC										
20...	1100	169	5800	7.9	.0	12.3	34	K15000	6500	410
JAN										
04...	1330	202	4300	7.9	.5	10.6	29	K12000	8000	340
FEB										
15...	1330	474	2350	7.8	6.0	16.5	33	K11000	5400	270
MAR										
13...	1015	329	3200	7.8	2.5	11.9	45	K11000	1100	300
APR										
10...	1100	1100	1440	7.9	9.0	10.2	50	K1100	4400	290
MAY										
08...	1100	1450	1200	8.0	10.5	9.4	65	3400	920	220
JUN										
05...	1100	2500	1460	7.4	19.5	7.0	210	K65000	K120000	210
JUL										
10...	1030	739	1700	7.5	24.5	6.0	57	K400	1200	240
31...	1320	217	4190	8.0	26.5	7.9	30	K33	K240	320
AUG										
28...	1315	151	5210	--	29.0	9.5	60	K130	680	350

K Results based on colony count outside the acceptable range (non-ideal colony count).

06803555 SALT CREEK AT GREENWOOD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
OCT										
04...	37	25	290	510	55	2.3	3.20	1.8	5.0	7.3
NOV										
01...	110	31	290	1600	41	2.6	3.00	1.9	4.9	7.5
DEC										
20...	110	34	280	1400	<1	2.3	3.40	.10	3.5	5.8
JAN										
04...	93	26	210	1100	14	2.3	3.10	1.0	4.1	6.4
FEB										
15...	73	22	150	510	224	2.3	1.00	1.9	2.9	5.2
MAR										
13...	81	24	170	720	118	2.2	1.40	1.3	2.7	4.9
APR										
10...	76	22	100	250	1670	2.2	.470	2.0	2.5	4.7
MAY										
08...	61	17	85	200	842	2.2	.230	2.8	3.0	5.2
JUN										
05...	56	16	81	250	3040	2.2	.220	6.8	7.0	9.2
JUL										
10...	68	17	110	370	486	2.5	.290	.21	.50	3.1
31...	86	26	220	1000	48	3.1	.460	.84	1.3	4.4
AUG										
28...	92	28	260	1300	6	2.8	.860	1.1	2.0	4.8

DATE	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT									
04...	2.20	7	100	1	<10	10	1600	--	--
NOV									
01...	2.70	6	200	1	10	11	930	840	90
DEC									
20...	.750	3	200	<1	10	7	1200	--	--
JAN									
04...	1.20	4	200	<1	10	7	540	--	--
FEB									
15...	.930	4	200	2	20	11	6200	6100	120
MAR									
13...	.230	3	200	2	20	9	3400	--	--
APR									
10...	.500	[illegible]	300	<1	20	17	15000	--	--
MAY									
08...	1.20	[illegible]	400	1	20	28	24000	24000	35
JUN									
05...	1.30	--	--	--	--	--	--	--	--
JUL									
10...	.820	6	200	<1	20	20	17000	--	--
31...	1.60	7	500	<1	20	4	1400	--	60
AUG									
28...	1.70	6	100	1	20	4	480	--	30

06803555 SALT CREEK AT GREENWOOD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT									
04...	5	750	--	--	.1	3	<1	40	8.7
NOV									
01...	7	740	40	700	<.1	2	<1	30	7.5
DEC									
20...	2	480	--	--	.1	3	<1	40	3.8
JAN									
04...	2	320	--	--	<.1	2	<1	30	5.2
FEB									
15...	11	310	190	120	<.1	2	<1	40	9.3
MAR									
13...	6	220	--	--	.2	2	1	30	4.3
APR									
10...	4	500	--	--	<.1	2	<1	60	10
MAY									
08...	11	700	680	20	.1	2	<1	100	7.0
JUN									
05...	--	--	--	--	--	--	--	--	71
JUL									
10...	7	500	--	--	<.1	2	1	70	14
31...	2	130	--	80	.2	3	<1	10	6.0
AUG									
28...	<1	230	--	190	<.1	3	<1	10	5.9

DATE	TIME	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
NOV							
01...	1000	70	1100	25	13	333	.70
FEB							
15...	1330	19	370	10	8.3	254	.40
MAY							
08...	1100	5	150	5	6.9	218	.30
JUN							
05...	1100	--	230	7	--	--	--
JUL							
31...	1320	38	680	17	11	284	.60
AUG							
28...	1315	50	920	22	11	296	.60

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	BORON, DIS-SOLVED (UG/L AS B) (01020)
NOV							
01...	27	3400	4.6	1380	2.6	2.70	520
FEB							
15...	19	1300	1.8	1670	2.3	.710	190
MAY							
08...	12	660	.90	2600	2.2	.250	100
JUN							
05...	--	--	--	--	--	--	--
JUL							
31...	22	2200	3.0	1300	2.7	1.20	370
AUG							
28...	23	2800	3.8	1150	2.8	1.60	430

06803555 SALT CREEK AT GREENWOOD, NE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4880	5890	3930	---	1010	3140	2200	842	1970	2530	3980	5150
2	5670	5930	4110	---	838	2990	689	1220	1040	2570	4070	2240
3	6350	4930	4150	---	975	3070	468	716	1540	2580	4080	4530
4	---	3200	4100	4200	1070	2190	615	750	1790	2600	4210	4500
5	5720	3280	4100	4250	2160	2210	899	792	1180	406	4190	5050
6	6750	4780	4290	3580	2170	2650	1160	1160	1140	728	4220	5550
7	6100	4500	4140	3540	2070	2870	1250	1110	1650	1200	4120	5550
8	6360	4820	4500	3520	2330	3210	1410	1340	1910	1450	4130	5510
9	5520	1880	4530	3830	2270	3240	1420	1500	607	1700	3980	5670
10	7140	2180	4340	3770	1680	2870	1550	1660	528	1820	3860	5660
11	3050	2940	4340	4150	1550	2860	538	1780	406	2100	3860	5610
12	4480	3740	4320	4310	1730	3340	542	1990	413	2180	4800	5610
13	4750	4130	4500	4300	1970	3350	967	1990	170	2540	4800	5430
14	5750	4210	4450	4560	1830	2640	1350	2050	307	2810	4710	4900
15	6600	4290	---	4560	2300	2430	1630	2200	582	2600	4820	5500
16	5720	4350	---	4490	1910	2850	1630	2090	285	2800	4840	5720
17	5520	4560	---	---	2040	2850	1840	2050	431	2800	4910	5800
18	5310	4730	---	---	2340	2430	1870	1550	661	3130	4880	5850
19	6250	4690	---	---	2270	2890	2000	429	979	3500	4750	5770
20	5090	4260	---	---	2320	2910	2220	681	1020	3800	5120	5720
21	6200	4550	---	---	2280	2200	686	964	1080	3510	1760	5610
22	6200	4540	---	4510	2230	1530	810	264	1170	3790	2480	5800
23	6250	4630	---	4520	1710	1340	910	592	977	3960	3930	5810
24	6350	4700	---	4320	1630	1540	1040	930	1390	3970	4650	5600
25	6400	4770	---	4270	2260	1610	1460	732	1590	3990	4680	5230
26	6700	4900	---	3860	2370	1160	1440	1380	1820	4050	4690	5750
27	6750	5000	---	3260	2370	1030	1240	1350	1830	4100	4760	5740
28	6770	4860	---	1620	2660	1030	1650	1600	2000	4200	4690	5620
29	6700	5200	---	1590	2360	1450	1680	1610	2350	4410	4880	5770
30	5830	4160	---	625	---	1640	621	1770	2360	4400	4800	5760
31	6750	---	---	840	---	1930	---	1910	---	4410	4930	---

TEMPERATURE, WATER (DEG C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	15.0	.0	---	2.5	6.5	7.0	8.5	21.0	25.0	24.0	27.0
2	22.0	17.0	.0	---	2.0	5.0	5.0	12.0	19.5	22.0	28.5	24.0
3	20.5	16.0	.0	---	2.0	7.0	5.0	13.0	20.0	23.0	28.5	25.0
4	---	11.0	---	.5	2.0	6.0	6.0	12.0	20.0	25.0	29.0	26.0
5	19.5	10.0	1.0	.5	.5	5.5	7.0	13.0	20.0	22.0	30.0	23.0
6	17.5	12.0	.0	.5	.5	5.5	11.0	13.0	22.0	22.0	26.0	24.0
7	17.0	14.0	.5	.5	.5	5.0	9.5	11.0	24.0	23.0	27.0	23.0
8	15.0	13.0	.5	1.0	2.5	.5	10.0	11.0	24.0	25.0	26.0	24.0
9	15.0	6.0	.5	.0	4.0	.5	9.0	10.0	19.5	27.0	27.0	24.0
10	15.0	5.5	2.0	.0	4.0	2.0	10.0	13.0	19.0	25.0	27.0	20.0
11	15.0	5.0	4.0	.0	4.0	4.0	10.0	15.0	19.0	27.0	27.0	23.0
12	13.5	4.5	1.5	.0	4.0	3.0	10.0	16.0	19.0	24.0	24.0	26.0
13	12.0	13.0	.5	.0	4.0	5.5	9.0	17.0	20.0	26.0	24.0	24.0
14	14.0	7.5	1.0	.0	6.0	5.0	9.0	16.0	23.0	25.0	28.0	18.5
15	19.0	6.5	---	.0	6.5	6.0	10.0	15.0	23.0	26.0	23.5	20.0
16	15.5	5.0	---	.0	5.5	5.0	12.0	17.0	26.0	27.0	28.0	18.5
17	15.0	6.0	---	---	5.0	4.5	12.5	20.0	23.0	27.0	27.5	22.0
18	14.0	9.0	---	---	3.0	3.0	12.5	21.0	24.0	27.5	27.0	24.0
19	13.0	9.0	---	---	3.0	3.0	13.0	15.0	25.0	28.0	26.0	24.5
20	12.0	6.0	---	---	4.0	3.0	12.0	20.0	25.0	29.0	27.0	25.0
21	10.0	7.0	---	---	4.0	4.0	7.0	22.0	25.0	29.0	24.0	23.5
22	10.0	5.5	---	.5	5.5	5.0	7.5	18.0	25.0	30.0	22.0	22.0
23	14.0	2.0	---	[illegible]	6.0	6.0	11.0	18.0	24.5	30.0	21.0	20.0
24	12.0	4.0	---	1.0	6.0	6.0	13.0	19.0	25.0	30.0	22.0	16.5
25	13.0	4.0	---	1.0	5.0	6.5	14.0	16.0	25.5	28.0	26.0	15.0
26	14.5	3.0	---	2.0	5.0	7.0	15.0	16.0	25.0	28.0	29.0	14.0
27	16.0	.0	---	1.0	3.0	6.0	16.5	16.0	24.0	27.5	29.5	15.0
28	12.0	-0.5	---	2.0	3.5	5.0	14.0	16.0	24.5	23.5	30.0	14.0
29	11.0	.0	---	3.0	3.0	6.0	12.0	17.0	25.0	25.0	24.5	17.0
30	11.0	.0	---	2.0	---	6.5	8.0	16.0	25.5	27.0	26.0	14.0
31	11.0	---	---	3.0	---	7.0	---	17.0	---	27.0	27.0	---
MEAN	---	7.5	---	---	3.5	5.0	10.5	15.5	23.0	26.0	26.5	21.0

06804000 WAHOO CREEK AT ITHACA, NE

LOCATION.--Lat 41°08'40", long 96°32'10", in NW1/4NW1/4 sec.33, T.14 N., R.8 E., Saunders County, Hydrologic Unit 10200203, on right bank 16 ft downstream from bridge on State Highway 63 and 0.5 mi south of Ithaca.

DRAINAGE AREA.--271 mi², of which 268 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WDR NE-71-1: Drainage area. WDR NE-78-1: 1977(P).

GAGE.--Water-stage recorder. Datum of gage is 1,110.48 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1959, nonrecording gages at same site and datum. Oct. 28, 1959, to Feb. 22, 1961, nonrecording gage at site 1.5 mi upstream at datum 8.21 ft higher.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--35 years, 84.1 ft³/s, 60,930 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,400 ft³/s June 24, 1963, gage height, 22.93 ft, from rating curve extended above 13,000 ft³/s on basis of indirect measurement of peak flow; minimum daily, 3.3 ft³/s June 11, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since about 1910, 23.22 ft, from floodmark, Aug. 2, 1959, discharge, 45,300 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 27	0215	1580	13.63	May 7	0515	1730	14.21
Apr. 3	0515	2170	15.75	June 5	1530	2510	16.76
Apr. 12	0430	2600	17.01	June 9	1745	3640	19.07
Apr. 21	2215	2330	16.25	June 11	1845	1780	14.39
Apr. 30	0230	2030	15.30	June 12	1845	*6910	21.21
May 3	1215	1760	14.30	June 16	2230	4190	19.81
May 4	2100	1650	13.90				

Minimum daily discharge, 36 ft³/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	47	49	52	381	109	149	384	181	127	68	44
2	42	48	45	54	679	100	403	314	333	121	68	52
3	56	60	47	54	367	94	1640	1040	245	134	68	48
4	69	105	50	58	388	150	386	912	211	151	67	44
5	45	58	50	60	147	153	267	694	1260	170	66	44
6	41	50	48	62	110	102	235	477	416	236	61	43
7	40	48	46	60	130	95	212	1010	242	169	59	43
8	40	50	45	58	132	75	253	390	198	131	60	41
9	40	133	46	54	134	88	286	317	1980	129	58	41
10	41	271	49	50	227	87	224	292	594	124	54	41
11	180	82	50	45	149	97	303	271	847	119	52	42
12	83	63	50	50	131	86	1420	248	3500	114	53	42
13	46	64	45	54	117	96	374	232	2980	105	53	42
14	45	63	40	52	112	112	290	203	686	103	52	41
15	44	57	42	51	129	260	250	193	547	100	52	40
16	44	53	41	50	270	118	216	194	1870	107	50	40
17	43	53	39	50	181	95	193	185	1500	151	50	40
18	42	53	42	49	121	115	181	248	384	114	50	40
19	45	56	44	47	102	81	172	554	324	95	50	39
20	55	76	45	45	104	88	165	377	325	91	50	39
21	92	63	45	48	107	128	875	241	297	85	61	38
22	48	53	44	50	113	306	931	775	269	74	73	36
23	48	52	46	54	150	513	415	401	238	72	53	37
24	47	51	44	58	346	357	293	252	209	73	49	41
25	46	51	45	60	317	271	248	675	197	74	49	40
26	46	54	46	64	162	404	227	369	192	175	57	39
27	46	81	45	70	132	824	202	265	166	146	51	40
28	46	86	44	100	98	274	168	285	139	90	49	42
29	45	60	46	430	92	226	353	229	129	82	49	43
30	46	54	46	913	---	177	1130	205	134	76	47	43
31	47	---	50	401	---	160	---	193	---	72	46	---
TOTAL	1605	2095	1414	3303	5628	5841	12461	12425	20593	3610	1725	1245
MEAN	51.8	69.8	45.6	107	194	188	415	401	686	116	55.6	41.5
MAX	180	271	50	913	679	824	1640	1040	3500	236	73	52
MIN	40	47	39	45	92	75	149	185	129	72	46	36
AC-FT	3180	4160	2800	6550	11160	11590	24720	24640	40850	7160	3420	2470

CAL YR 1983 TOTAL 57472 MEAN 157 MAX 3680 MIN 28 AC-FT 114000
WTR YR 1984 TOTAL 71945 MEAN 197 MAX 3500 MIN 36 AC-FT 142700

06805500 PLATTE RIVER AT LOUISVILLE, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°00'55", long 96°09'28", in NW1/4NW1/4 sec.14, T.12 N., R.11 E., Sarpy County, Hydrologic Unit 10200202, on the left bank at the upstream side of bridge on Nebraska Highway 50, 1 mi north of Louisville.

DRAINAGE AREA.--85,800 mi^2, approximately, of which about 71,000 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1953 to current year. October 1961 to September 1973 published as Platte River at South Bend.

REVISED RECORDS.--WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,007.10 ft National Geodetic Vertical Datum of 1929. Dec. 5, 1961, to Sept. 30, 1973, at site 7 mi upstream at datum 31.43 feet higher.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--31 years, 6,306 ft^3/s, 4,569,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 144,000 ft^3/s June 14, 1984, gage height, 11.34 ft; maximum gage height, 12.45 ft Mar. 30, 1960; minimum daily discharge, 131 ft^3/s Sept. 3, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known since at least 1881, 144,000 ft^3/s June 14, 1984, gage height, 11.34 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 144,000 ft^3/s June 14, gage height, 11.34 ft; minimum daily discharge, 2,560 ft^3/s Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12700	5910	2900	7600	12000	16000	21600	34700	21800	17600	4180	3190
2	11800	6330	2800	8400	13000	15500	24700	40100	23500	16300	3960	3430
3	11100	6630	2900	9200	13000	15300	43500	42900	20700	14800	3810	2920
4	11300	8000	3300	9800	12500	16500	51000	44800	19400	14900	3790	2740
5	11600	6940	3600	10000	12000	19500	44600	42800	21300	20700	3770	2560
6	11000	7200	4400	10400	13000	18700	35900	40500	22200	17900	3700	2890
7	10500	7330	4700	10600	13500	18000	30000	45800	19000	19800	3940	3230
8	8440	7060	5200	11000	13500	16300	32900	49000	22000	18000	3900	3800
9	8050	7670	6000	11000	13500	13300	38100	43900	33400	16000	3850	4420
10	7010	8330	6600	11000	14000	12200	35400	40900	30800	13700	3910	4600
11	7830	7810	6800	11000	14500	11900	35000	39000	23200	12400	3560	5070
12	7880	7910	6800	10800	16000	13200	42400	33200	43200	11100	3440	5480
13	7620	7050	7000	10600	16500	14400	47900	29800	97000	9800	3290	5960
14	6760	7420	7000	10200	19000	14800	41500	27600	123000	8420	3250	6120
15	6690	6890	7000	9800	25000	16600	34800	25400	80000	8220	3060	6290
16	6250	6660	6800	9600	30300	18900	30800	23000	72600	7100	2940	6470
17	6740	6480	6600	9400	28600	18400	27100	22100	70200	7310	2900	7230
18	6010	7160	6400	9200	27200	17900	25200	22000	71900	7020	2680	6240
19	6100	6760	5800	9000	20500	18800	22700	45800	64000	7010	2650	6610
20	6970	6820	5600	8800	16000	17300	19500	40600	50300	6200	2640	6930
21	7060	7660	5400	8800	14700	16700	23600	31900	33500	5800	2830	6050
22	7200	8340	5200	8600	15500	19100	39300	44300	29400	5400	3140	6220
23	7120	8430	5200	8600	16800	24400	48300	43800	31500	4960	3370	6110
24	7110	8320	5200	8800	17900	25600	41200	35000	30700	4880	3750	6200
25	6340	7770	5400	9000	19000	25500	35700	33200	27300	4470	4040	6370
26	6810	7900	5400	9000	19300	29200	32000	37700	24900	5020	4650	6060
27	5680	8760	5400	9400	18700	35900	32700	32400	20300	5360	4580	6120
28	7180	6130	5600	9800	18200	34600	30400	28400	19200	4910	4140	6180
29	6330	3850	5600	10000	17100	31700	26400	27200	18400	5270	3730	6300
30	5640	3400	5800	11000	---	27900	33200	25000	18200	4670	3580	6440
31	5550	---	6600	12000	---	24400	---	23000	---	4550	3380	---
TOTAL	244370	212920	169000	302400	500800	618500	1027400	1095300	1182900	309570	110410	158230
MEAN	7883	7097	5452	9755	17270	19950	34250	35350	39430	9986	3562	5274
MAX	12700	8760	7000	12000	30300	35900	51000	49000	123000	20700	4650	7230
MIN	5550	3400	2800	7600	12000	11900	19500	22000	18200	4470	2640	2560
AC-FT	484700	422300	335200	599800	993300	1227000	2038000	2174000	2346000	614000	219000	313800

CAL YR 1983 TOTAL 4974190 MEAN 13630 MAX 64600 MIN 2400 AC-FT 9866000
WTR YR 1984 TOTAL 5932300 MEAN 16210 MAX 123000 MIN 2560 AC-FT11767000

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1974 to September 1981.
WATER TEMPERATURES: November 1974 to September 1981.
SUSPENDED SEDIMENT DISCHARGE: October 1971 to September 1981.

REMARKS.--Prior to July 1, 1971, sediment records were obtained by the U.S. Corps of Engineers.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,450 micromhos Sept. 1, 1976; minimum daily, 254 micromhos Aug. 7, 1981.
WATER TEMPERATURES: Maximum, 30.0°C July 24, 1977, Aug. 19, 1979; minimum, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily, 11,600 mg/L May 19, 1974; minimum daily, 60 mg/L July 19, 1976.
SEDIMENT LOADS: Maximum daily, 1,180,000 tons Mar. 21, 1978; minimum daily, 64 tons July 19, 1976.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT											
25...	1130	5980	770	8.0	9.0	--	--	11.2	24	K920	5000
NOV											
14...	1000	2820	629	8.2	6.0	735	20	11.6	34	K7400	19000
DEC											
08...	1045	6000	805	8.0	.0	--	--	12.9	15	260	1100
JAN											
17...	1200	9390	730	7.8	.0	--	--	15.0	19	220	16000
FEB											
27...	1100	18200	750	8.0	2.0	745	130	13.0	47	4300	31000
MAR											
20...	1045	17000	640	7.8	.5	739	--	15.7	37	210	1600
APR											
30...	1230	35700	628	7.9	8.0	750	--	11.0	86	12000	20000
MAY											
14...	1230	26200	766	7.5	19.0	760	37	8.8	70	K140	1100
JUN											
04...	1100	18500	720	8.4	21.0	737	--	7.8	39	460	650
JUL											
12...	1115	11700	745	8.1	25.5	745	--	7.4	60	K620	960
AUG											
07...	1100	3720	745	8.3	30.0	738	30	12.6	190	K120	1100
SEP											
04...	1130	2560	728	8.5	23.5	--	--	--	60	K180	1400

K Results based on colony count outside the acceptable range (non-ideal colony count).

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT										
25...	210	--	56	16	77	2	--	--	100	74
NOV										
14...	220	--	62	16	56	2	8.5	--	97	43
DEC										
08...	270	--	76	20	63	2	--	--	120	45
JAN										
17...	250	--	71	18	--	--	--	--	130	18
FEB										
27...	240	56	68	18	53	2	9.7	189	130	32
MAR										
20...	230	--	65	17	56	2	--	--	140	34
APR										
30...	230	--	63	17	39	1	--	--	120	14
MAY										
14...	240	46	66	18	55	2	12	194	150	31
JUN										
04...	270	--	75	21	53	1	--	--	140	20
JUL										
12...	210	--	58	16	58	2	--	--	110	43
AUG										
07...	190	26	50	16	77	3	9.0	165	89	130
SEP										
04...	170	--	43	15	--	--	--	--	81	85

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT										
25...	--	--	--	--	--	--	91	--	--	1.3
NOV										
14...	.40	35	--	--	--	--	90	1.5	.030	1.5
DEC										
08...	--	--	--	--	--	--	36	--	--	3.0
JAN										
17...	--	--	--	--	--	--	19	--	--	1.7
FEB										
27...	.40	28	459	450	.62	22600	314	1.9	.030	1.9
MAR										
20...	--	--	--	--	--	--	227	--	--	1.5
APR										
30...	--	--	--	--	--	--	824	--	--	1.7
MAY										
14...	.50	15	473	460	.64	33500	332	1.3	.040	1.3
JUN										
04...	--	--	--	--	--	--	200	--	--	2.0
JUL										
12...	--	--	--	--	--	--	388	--	--	1.3
AUG										
07...	.40	23	435	490	.59	4370	96	.04	.060	.10
SEP										
04...	--	--	--	--	--	--	79	--	--	<.10

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 25...	--	.080	--	1.1	1.2	2.5	.340	--	--	6.7
NOV 14...	1.4	.150	.130	1.3	1.4	2.9	.360	.220	.150	9.6
DEC 08...	--	.820	--	.28	1.1	4.1	.230	--	--	3.5
JAN 17...	--	.150	--	.55	.70	2.4	.190	--	--	4.0
FEB 27...	2.1	.140	.210	2.0	2.1	4.0	.620	.210	.210	14
MAR 20...	--	.130	--	1.2	1.3	2.8	.340	--	--	8.8
APR 30...	--	.520	--	.78	1.3	3.0	1.60	--	--	25
MAY 14...	1.3	.070	.050	3.4	3.5	4.8	.410	.160	.070	17
JUN 04...	--	.010	--	1.6	1.6	3.6	.410	--	--	11
JUL 12...	--	.020	--	4.0	4.0	5.3	.500	--	--	15
AUG 07...	<.10	.030	.030	2.9	2.9	3.0	.350	.080	.070	20
SEP 04...	--	.040	--	1.8	1.8	--	.310	--	--	6.0

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)
NOV 14...	1000	30	6	5	<100	120	--	.5	1	1	<10	<1
FEB 27...	1100	30	6	3	300	120	--	<.5	<1	<1	20	<1
MAY 14...	1230	20	4	2	<100	140	<100	<1.0	<1	4	20	1
AUG 07...	1100	20	7	6	<100	100	--	<1.0	1	1	<10	<1

DATE	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)
NOV 14...	<3	8	4	2500	26	8	2	35	200	8	.1
FEB 27...	<3	25	8	10000	20	21	<1	26	440	4	.1
MAY 14...	<3	26	9	7800	10	18	5	35	300	6	.1
AUG 07...	<3	15	4	4500	12	16	<1	31	310	2	.1

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 14...	<.1	<10	3	2	2	1	4	440	<6	30	9
FEB 27...	<.1	<10	<1	2	2	<1	<1	490	<6	50	16
MAY 14...	<.1	<10	<1	4	2	<1	<1	460	7	40	25
AUG 07...	<.1	<10	<1	4	3	<1	<1	360	10	40	14

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
NOV 14...	1000	2820	6.0	295	2250	--	--
FEB 27...	1100	18200	2.0	1250	61400	17	18
MAY 14...	1230	26200	19.0	1300	92000	--	--
AUG 07...	1100	3720	30.0	514	5160	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
NOV 14...	--	--	52	61	82	98	100
FEB 27...	19	21	39	54	91	99	100
MAY 14...	--	--	29	39	74	97	99
AUG 07...	--	--	33	36	47	73	85

06806500 WEEPING WATER CREEK AT UNION, NE

LOCATION (REVISED).--Lat 40°47'37", long 95°54'42", in SE1/4NE1/4 sec.35, T.10 N., R.13 E., Cass County, Hydrologic unit 10240001, on left bank 100 ft upstream from bridge on U.S. Highways 73 and 75, 1.5 mi southeast of Union and 2.8 mi downstream from South Branch Weeping Water Creek.

DRAINAGE AREA.--241 mi².

PERIOD OF RECORD.--February 1950 to current year.

REVISED RECORDS.--WSP 2118: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 926.72 ft National Geodetic Vertical Datum of 1929. Prior to May 14, 1951, nonrecording gage at site 2 mi upstream at different datum. May 15, 1951, to Aug. 22, 1968, water-stage recorder for stages above 7.9 ft and nonrecording gage, Aug. 23, 1968 to Aug. 22, 1980, water-stage recorder on downstream side of bridge pier, Aug. 23, 1980 to Nov. 4, 1980 near left downstream bridge wingwall all at datum 3.00 ft higher. Nov. 5, 1980 to Aug. 23, 1984 near left downstream bridge wingwall at present datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--34 years, 94.3 ft³/s, 68,320 acre-ft/yr; median of yearly mean discharges, 69 ft³/s, 50,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,300 ft³/s May 9, 1950, gage height, 29.80 ft, from floodmark, present site and datum, from rating curve extended above 12,000 ft³/s on basis of measurement of peak flow through bridges and over highway embankment; minimum daily, 0.1 ft³/s Sept. 10-12, 14, 15, 17, 18, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 29	2015	3490	16.73	June 13	0415	*53500	29.53
May 19	1000	3230	16.25	June 16	1045	4340	18.16
June 12	1500	3800	17.28	July 4	1200	4370	18.22

Minimum daily discharge, 36 ft³/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	54	46	52	280	96	146	407	236	211	87	49
2	38	54	49	54	500	96	338	361	377	189	90	82
3	36	113	50	56	620	96	1440	378	282	177	86	79
4	37	159	52	56	420	104	443	416	533	1480	83	67
5	41	93	54	58	340	102	294	422	1000	286	81	60
6	42	65	54	60	300	93	239	331	333	487	80	55
7	42	61	54	62	260	89	217	318	286	238	78	48
8	42	58	54	64	230	79	239	307	264	170	75	50
9	41	86	52	66	240	78	287	279	360	157	73	49
10	45	161	54	64	200	89	241	258	688	176	69	49
11	122	93	54	56	190	89	226	244	244	172	68	49
12	114	71	52	54	210	87	478	229	2130	133	67	48
13	70	69	50	52	180	88	346	221	25000	127	64	45
14	62	65	50	50	167	91	305	202	4400	121	61	42
15	52	62	52	54	198	120	278	195	1620	119	66	38
16	50	60	50	56	250	116	250	197	2850	118	59	42
17	47	60	48	54	207	107	236	190	1400	119	57	42
18	46	60	47	50	179	108	233	226	1060	117	60	42
19	61	62	44	47	234	102	211	2130	765	115	61	45
20	70	60	48	46	161	101	184	725	644	111	61	43
21	66	57	48	50	145	107	928	342	537	108	67	41
22	65	57	43	52	145	147	942	929	425	104	77	39
23	59	56	46	58	138	203	426	668	381	100	66	43
24	55	56	44	70	120	217	341	329	349	97	66	42
25	51	56	44	80	111	203	272	718	338	98	71	40
26	49	56	45	88	108	268	258	462	325	101	69	40
27	49	54	50	94	108	449	346	314	412	98	65	42
28	47	52	49	100	103	228	240	314	311	93	61	43
29	44	50	49	120	97	202	1150	282	280	88	59	41
30	46	50	50	130	---	172	1260	265	250	87	55	40
31	49	---	52	200	---	154	---	252	---	87	55	---
TOTAL	1680	2110	1534	2153	6441	4281	12794	12911	48080	5884	2137	1435
MEAN	54.2	70.3	49.5	69.5	222	138	426	416	1603	190	68.9	47.8
MAX	122	161	54	200	620	449	1440	2130	25000	1480	90	82
MIN	36	50	43	46	97	78	146	190	236	87	55	38
AC-FT	3330	4190	3040	4270	12780	8490	25380	25610	95370	11670	4240	2850

CAL YR 1983 TOTAL 63272 MEAN 173 MAX 4490 MIN 30 AC-FT 125500
WTR YR 1984 TOTAL 101440 MEAN 277 MAX 25000 MIN 36 AC-FT 201200

06807000 MISSOURI RIVER AT NEBRASKA CITY, NE

LOCATION.--Lat 40°40'55", long 95°50'48", in NW1/4NE1/4 sec.9, T.8 N., R.14 E., Otoe County, Hydrologic Unit 10240001, on right bank 0.7 mi upstream from Waubonsie Highway Bridge at Nebraska City, and at mi 562.6.

DRAINAGE AREA.--410,000 mi^2, approximately. The 3,959 mi^2 in Great Divide basin are not included.

PERIOD OF RECORD.--August 1929 to current year. Gage-height records collected in this vicinity from August 1878 to December 1899 are contained in reports of Missouri River Commission.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 905.36 ft National Geodetic Vertical Datum of 1929, supplementary adjustment of 1954. See WSP 1918 or 1919 for history of changes prior to Apr. 1, 1963.

REMARKS.--Records good except those for Dec. 25 to Feb. 4, which are poor. Flow regulated by upstream main-stem reservoirs. National Weather Service gage-height telemeter at station. Corps of Engineers rain-gage and gage-height satellite data collection platform at station.

AVERAGE DISCHARGE.--55 years, 36,530 ft^3/s, 26,470,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 414,000 ft^3/s Apr. 19, 1952; maximum gage height, 27.66 ft Apr. 18, 1952; minimum discharge, 1,600 ft^3/s Dec. 31, 1946 (discharge measurement); minimum gage height observed, -0.28 ft Dec. 24, 1960, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 182,000 ft^3/s June 15, gage height, 24.78 ft; minimum daily, 22,900 ft^3/s Dec. 24; minimum gage height, 5.07 ft Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53000	43800	41000	33500	32700	47100	66500	98500	64300	114000	59800	54700
2	53100	45800	40500	33800	34000	46300	67400	100000	65000	101000	59200	55600
3	52700	47100	40700	33400	35400	46100	80900	101000	64900	89100	58500	54500
4	52400	48700	39600	33000	37800	47100	97700	101000	63000	83800	57800	54000
5	52700	47900	38300	33000	41500	48700	101000	100000	65600	80000	58100	53800
6	52200	47600	38600	33000	39300	50700	91800	99700	66600	78300	58800	54400
7	51700	47500	36500	33000	37900	48700	84100	98200	64000	71800	59300	54400
8	50400	47100	34600	33000	35700	47700	83100	106000	67200	65900	59200	55000
9	49300	47800	33500	33000	36300	44400	93700	108000	92000	61700	58700	54500
10	49200	48100	32400	32200	38500	40900	97700	99700	94900	58800	58000	54300
11	50200	48800	33200	32000	40600	41800	93000	94600	77500	59600	57500	53800
12	50100	48200	33400	31800	43800	44200	94400	90600	76900	62100	56000	55200
13	49000	47900	34800	31500	46500	44900	104000	85300	136000	64300	56200	55900
14	47700	48200	34100	31300	47600	45700	113000	77900	166000	64500	55800	56300
15	47500	48200	33600	31000	53700	48800	112000	72200	180000	64700	54600	56100
16	46900	48000	33600	31000	60100	54100	110000	67800	163000	65900	54500	56400
17	46700	48200	32200	31000	64200	52900	110000	64100	161000	66700	55000	57000
18	46700	48500	31200	31000	64600	50500	112000	61600	170000	67800	54900	56900
19	47200	48900	31000	30800	60600	51600	108000	78300	172000	68200	54600	56300
20	48500	49600	29400	30000	53100	50100	99300	97100	161000	67900	54900	55800
21	49200	50700	29300	29400	50200	49800	93800	80200	147000	66900	54900	55800
22	49000	50500	29000	29300	51200	50500	99500	76500	136000	65300	55900	55100
23	48000	50300	26100	29500	53600	54000	111000	90500	134000	62700	55900	54500
24	48400	50400	22900	31000	53900	63100	111000	78700	135000	61000	55400	54800
25	47900	49300	24700	31900	51500	65900	96200	74700	136000	59700	55600	55200
26	47300	47400	27700	32100	50900	68700	87000	76900	135000	59200	55800	55200
27	46800	47600	31000	32400	51100	78000	85400	74400	135000	61000	56000	55400
28	46000	46900	35500	32400	49700	78400	87700	70000	135000	62000	55300	55100
29	46100	43000	34800	32400	48300	75200	83500	71500	134000	60700	54900	54400
30	45300	41500	34200	32400	---	72300	95100	75200	126000	60100	55100	53800
31	43900	---	33500	32400	---	69200	---	69900	---	60400	55100	---
TOTAL	1515100	1433500	1030900	987500	1364300	1677400	2869800	2640100	3523900	2135100	1751300	1654200
MEAN	48870	47780	33250	31850	47040	54110	95660	85160	117500	68870	56490	55140
MAX	53100	50700	41000	33800	64600	78400	113000	108000	180000	114000	59800	57000
MIN	43900	41500	22900	29300	32700	40900	66500	61600	63000	58800	54500	53800
AC-FT	3005000	2843000	2045000	1959000	2706000	3327000	5692000	5237000	6990000	4235000	3474000	3281000

CAL YR 1983 TOTAL 20173000 MEAN 55270 MAX 119000 MIN 22900 AC-FT 40010000
WTR YR 1984 TOTAL 22583100 MEAN 61700 MAX 180000 MIN 22900 AC-FT 44790000

06811500 LITTLE NEMAHA RIVER AT AUBURN, NE

LOCATION.--Lat 40°23'33", long 95°48'46", in NE1/4NW1/4 sec.23, T.5 N., R.14 E., Nemaha County, Hydrologic Unit 10240006, on left bank at downstream side of bridge on U.S. Highway 136, 1 mi downstream from Longs Creek and Willow Creek and 1 mi east of Auburn.

DRAINAGE AREA.--793 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1949 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 889.87 ft National Geodetic Vertical Datum of 1929. See WSP 2119 for history of changes prior to July 24, 1967.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--35 years, 292 ft³/s, 211,600 acre-ft/yr; median of yearly mean discharges, 203 ft³/s, 147,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 164,000 ft³/s May 9, 1950, gage height, 27.65 ft, from floodmark, from rating curve extended above 49,000 ft³/s on basis of computations of peak flow through bridge and culvert openings and over highway and railway embankments at gage heights 24.96 ft and 27.65 ft; minimum daily, 0.87 ft³/s July 6-8, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 3	0800	8580	15.07	May 22	1900	6600	13.41
Apr. 21	2200	7390	14.07	June 9	1900	12000	17.66
Apr. 29	2330	10900	16.83	June 13	1500	*27300	23.65
May 19	1700	13500	18.62	July 4	1600	14000	18.99

Minimum daily discharge, 60 ft³/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	84	86	102	400	171	369	1690	475	208	145	77
2	65	81	88	104	1000	166	2060	1040	504	194	145	129
3	60	85	88	108	1300	162	6880	1090	595	235	145	160
4	62	136	90	112	1100	186	2540	1120	686	9250	136	125
5	65	145	94	114	900	198	1500	914	1980	4000	131	106
6	66	103	88	112	660	181	900	738	1080	1940	132	103
7	64	93	86	110	760	170	600	703	654	676	127	99
8	62	90	82	108	780	150	783	646	661	540	126	107
9	64	103	88	104	840	125	2000	549	3450	419	119	99
10	65	173	88	100	900	163	1200	509	2760	298	119	104
11	104	159	88	100	1100	207	900	487	913	250	115	110
12	147	117	86	98	1400	181	1660	455	2800	252	107	113
13	106	110	82	96	1000	202	1300	437	21500	274	98	112
14	86	105	80	94	700	206	800	405	7580	256	94	112
15	80	98	76	92	560	280	600	381	3820	226	90	108
16	76	94	74	90	460	269	521	400	3690	226	86	92
17	74	95	72	86	359	293	456	410	2650	264	84	93
18	73	96	70	84	309	370	416	374	1740	224	80	91
19	77	96	78	82	487	270	389	7400	1230	218	86	90
20	83	95	82	82	332	260	374	3610	973	200	94	86
21	92	94	84	80	268	342	3090	1470	1650	190	111	87
22	95	92	80	82	248	494	4030	3460	839	190	145	85
23	92	91	84	82	237	994	1510	2400	704	184	135	85
24	83	93	82	84	213	993	913	995	643	188	109	85
25	81	94	86	86	195	862	687	2040	682	179	104	85
26	78	96	90	92	195	820	603	1450	526	175	99	85
27	78	116	92	100	195	2140	801	819	788	172	96	91
28	75	134	94	120	176	810	641	746	473	165	87	99
29	74	120	96	135	164	719	3250	638	361	156	81	98
30	78	120	98	160	---	517	5910	562	237	156	80	98
31	81	---	100	210	---	408	---	514	---	150	77	---
TOTAL	2455	3208	2652	3209	17238	13309	47683	38452	66644	22055	3383	3014
MEAN	79.2	107	85.5	104	594	429	1589	1240	2221	711	109	100
MAX	147	173	100	210	1400	2140	6880	7400	21500	9250	145	160
MIN	60	81	70	80	164	125	369	374	237	150	77	77
AC-FT	4870	6360	5260	6370	34190	26400	94580	76270	132200	43750	6710	5980

CAL YR 1983	TOTAL	135185	MEAN	370	MAX	5810	MIN	52	AC-FT	268100
WTR YR 1984	TOTAL	223302	MEAN	610	MAX	21500	MIN	60	AC-FT	442900

06811500 LITTLE NEMAHA RIVER AT AUBURN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
OCT 12...	1410	154	520	8.0	13.5	9.8	47	K88000	K180000	210	61
NOV 08...	1300	89	605	8.3	12.0	9.0	23	K4900	7000	240	69
DEC 07...	1030	86	700	8.0	.5	12.3	14	2700	1500	300	87
JAN 04...	1320	113	620	7.6	.0	9.8	17	3400	7300	260	74
FEB 03...	1100	300	275	7.2	.0	13.5	75	2500	51000	100	29
MAR 01...	1445	176	598	8.1	5.5	12.3	22	210	K120	260	74
APR 04...	1355	2250	295	7.5	7.0	11.6	130	K4500	K420000	120	33
MAY 02...	1520	1020	460	7.7	12.5	10.1	50	2500	5300	170	50
31...	1515	510	552	7.7	20.5	8.3	31	900	1200	260	75
JUL 11...	1410	562	402	7.6	26.0	7.2	140	4500	K21000	170	48
AUG 21...	1330	110	595	8.0	23.5	8.9	260	4600	4200	260	72
SEP 20...	0920	88	625	8.3	18.5	8.7	30	480	240	270	77

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 12...	15	42	16	246	2.3	.200	2.3	2.5	4.8	.500	9.4
NOV 08...	17	56	13	96	1.8	.120	1.3	1.4	3.2	.380	4.7
DEC 07...	21	63	16	35	3.2	.290	1.3	1.6	4.8	.260	2.7
JAN 04...	18	55	11	8	3.3	.340	.66	1.0	4.3	.390	3.1
FEB 03...	7.4	24	4.9	814	2.8	.420	2.1	2.5	5.3	.790	18
MAR 01...	18	54	13	127	3.2	.040	.76	.80	4.0	.320	3.8
APR 04...	8.3	29	29	2630	3.0	.430	5.6	6.0	9.0	1.30	46
MAY 02...	12	40	6.8	744	4.5	.070	2.9	3.0	7.5	.950	39
31...	18	53	8.8	212	4.6	.020	1.1	1.1	5.7	.310	6.4
JUL 11...	11	36	7.0	1910	4.0	.050	1.3	1.3	5.3	.800	37
AUG 21...	19	61	12	57	2.6	<.010	--	1.0	3.6	.320	5.7
SEP 20...	19	59	13	32	2.2	.020	.88	.90	3.1	.230	3.1

06811500 LITTLE NEMAHA RIVER AT AUBURN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
OCT 12...	1410	--	30	.9	--	--	--	--	--	--
NOV 08...	1300	0	33	1	5.3	258	.30	21	370	.50
FEB 03...	1100	2	14	.6	6.4	101	.20	11	160	.21
MAY 02...	1520	6	22	.8	5.0	169	.30	15	250	.34
AUG 21...	1330	8	33	.9	3.8	250	.40	17	370	.50

DATE	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
OCT 12...	--	--	--	--	--	--	--	--	--	--
NOV 08...	89	1.8	.270	7	300	60	1	<10	8	3400
FEB 03...	128	2.8	.310	--	--	20	--	--	--	--
MAY 02...	695	4.4	.180	6	400	40	1	20	25	24000
AUG 21...	109	2.6	.170	--	--	70	--	--	--	--

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE) (01044)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN) (01054)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
OCT 12...	--	--	--	--	--	--	--	--	--	--
NOV 08...	3400	14	4	450	400	47	<.1	2	<1	240
FEB 03...	--	190	--	--	--	68	--	--	--	--
MAY 02...	24000	50	13	610	600	14	<.1	3	<1	90
AUG 21...	--	6	--	--	--	41	--	--	--	--

06813500 MISSOURI RIVER AT RULO, NE

LOCATION.--Lat 40°03'14", long 95°25'12", in NW1/4NW1/4 sec.17, T.1 N., R.18 E., Richardson County, Hydrologic Unit 10240005, on right bank at downstream side of bridge on U.S. Highway 159 at Rulo, 3.2 mi upstream from Big Nemaha River, and at mi 498.0.

DRAINAGE AREA.--414,900 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

PERIOD OF RECORD.--October 1949 to current year in reports of Geological Survey. Gage-height record collected at site 80 ft upstream January 1886 to December 1899 published in reports of Missouri River Commission; September 1929 to September 1950 in files of Kansas City office of Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 837.23 ft National Geodetic Vertical Datum of 1929. Oct. 1949 to Sept. 12, 1950, nonrecording gage at site 80 ft upstream and Sept. 13, 1950 to Apr. 19, 1983, recording gage on downstream end of middle pier, all at same datum.

REMARKS.--Records good except those for Dec. 17 to Feb. 5, which are poor. Flow regulated by upstream main-stem reservoirs. National Weather Service gage-height telemeter at station. Corps of Engineers gage-height satellite data collection platform at station.

AVERAGE DISCHARGE.--35 years, 40,930 ft³/s, 29,650,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358,000 ft³/s Apr. 22, 1952, gage height, 25.60 ft; minimum daily, 4,420 ft³/s Jan. 13, 1957; minimum gage height, 0.65 ft Jan. 7, 1971, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1881 reached a stage of 22.9 ft, from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 242,000 ft³/s June 16, gage height, 24.40 ft; minimum daily, 23,300 ft³/s Dec. 24; minimum gage height not determined, occurred during period of no gage-height record Dec. 17 to Feb. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54200	46800	43200	34000	34000	50900	68600	123000	70500	136000	61300	55300
2	54500	46400	41700	33900	35000	49300	69700	116000	66600	125000	60000	55900
3	53600	47000	40700	33800	37000	48800	98300	111000	67400	115000	59000	56500
4	53100	50700	40200	33700	40000	48800	103000	111000	64300	116000	58600	55500
5	53600	50000	39000	33700	43000	50400	102000	110000	67000	110000	59000	54700
6	53700	48700	38800	33700	41000	53700	98200	110000	76400	96300	59400	55300
7	52800	48700	38400	33700	39400	52600	88900	110000	72400	84500	59900	55600
8	52000	48200	36000	33700	38400	50800	87100	109000	83200	75700	60000	56000
9	50100	49200	35000	33300	38600	49000	96400	112000	104000	68800	59400	55400
10	49600	52000	34100	32900	41200	44500	101000	112000	132000	66100	59400	55700
11	50500	52200	33900	32500	43800	44300	100000	104000	109000	65300	59400	55700
12	51600	50900	34500	32300	46300	46000	100000	97600	83600	65000	58600	55500
13	50900	49900	35000	32000	50200	47000	103000	92800	102000	65600	58300	56400
14	49500	48800	35200	31800	51800	46700	110000	38300	134000	66100	57600	56600
15	48300	49600	34000	31500	52200	48200	115000	82500	169000	66000	56800	56800
16	48300	49100	33900	31500	60100	53700	115000	76900	216000	67700	56300	57000
17	47500	49200	33000	31500	68200	56300	113000	71300	184000	70700	55600	57500
18	47800	49400	31800	31500	66000	53900	112000	66100	182000	71100	56100	58000
19	47900	50800	31400	31400	65500	52700	112000	77200	186000	71400	56100	56700
20	48700	50200	30000	30600	58100	53000	109000	107000	188000	70500	56400	57000
21	49600	51900	29500	30000	62600	51500	108000	103000	186000	69400	56400	56800
22	49200	52000	29300	29800	51500	52900	116000	90100	172000	69400	57500	56400
23	48400	51500	26800	30400	53200	58600	113000	93100	162000	67400	58000	56500
24	48300	52100	23300	31600	57400	68000	115000	91200	155000	65000	57500	56400
25	48500	52200	25500	32500	54500	76700	112000	85100	152000	63500	56900	56400
26	48000	50500	28400	33000	53300	75000	99900	90100	148000	62300	57300	56600
27	47500	51100	32000	33000	53100	86300	93400	84400	147000	63100	57500	56500
28	47300	54700	36000	33000	53300	88200	94900	78400	146000	65600	57100	55900
29	47100	49400	35200	33000	52500	82000	102000	72500	148000	64700	56300	54600
30	46800	45100	34500	33000	---	76600	132000	78800	145000	62600	55500	53900
31	46600	---	34000	33000	---	72900	---	71100	---	61500	55400	---
TOTAL	1545500	1498300	1054300	1005300	1441200	1789300	3088400	2925500	3918400	2387300	1792600	1683100
MEAN	49850	49940	34010	32430	49700	57720	102900	94370	130600	77010	57830	56100
MAX	54500	54700	43200	34000	68200	88200	132000	123000	216000	136000	61300	58000
MIN	46600	45100	23300	29800	34000	44300	68600	66100	64300	61500	55400	53900
AC-FT	3065000	2972000	2091000	1994000	2859000	3549000	6126000	5803000	7772000	4735000	3556000	3338000

CAL YR 1983 TOTAL 21352900 MEAN 58500 MAX 121000 MIN 23300 AC-FT 42350000
WTR YR 1984 TOTAL 24129200 MEAN 65930 MAX 216000 MIN 23300 AC-FT 47860000

06814000 TURKEY CREEK NEAR SENECA, KS

LOCATION.--Lat 39°56'52", long 96°06'30", in SW1/4NW1/4SW1/4 sec.20, T.1 S., R.12 E., Nemaha County, Hydrologic Unit 10240007, at downstream side of highway bridge, 2.0 mi downstream from Clear Creek, 5.0 mi upstream from Big Nemaha River, and 8.0 mi northwest of Seneca.

DRAINAGE AREA.--276 mi².

PERIOD OF RECORD.--October 1948 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 1,037.53 ft, National Geodetic Vertical Datum of 1929. Prior to Oct. 19, 1956, water-stage recorder (occasional operation only) and nonrecording gage on former channel 400 ft south of present site at present datum. Oct. 19, 1956, to June 15, 1957, nonrecording gage at highway bridge 1.2 mi upstream at different datum. June 16, 1957, to Mar. 27, 1958, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--36 years, 129 ft³/s, 93,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft³/s Oct. 11, 1973, gage height, 24.77 ft; no flow at times in 1956-57, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 3	0300	9600	22.89	June 10	0300	*10600	23.20
Apr. 22	0100	4080	19.57	July 4	1800	3260	18.22
Apr. 30	0400	8400	22.52				

Minimum discharge, 1.6 ft³/s Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	8.1	47	12	175	64	179	673	135	113	29	1.0
2	2.1	6.6	45	13	180	56	2870	470	134	107	28	7.5
3	1.8	177	40	14	170	53	6790	426	191	102	26	17
4	1.8	99	37	15	115	120	2710	424	127	1620	25	12
5	2.1	27	35	15	90	159	676	308	118	417	25	7.7
6	2.1	17	31	16	105	82	422	275	107	172	25	6.1
7	2.1	13	30	19	90	68	329	258	111	134	23	4.6
8	1.9	12	30	30	66	54	749	225	571	130	21	4.7
9	2.1	20	31	41	62	54	762	199	4410	101	19	5.6
10	2.3	34	32	34	60	65	414	188	6290	83	17	5.8
11	17	26	33	24	58	62	378	175	670	79	16	5.9
12	13	19	33	20	56	50	672	160	419	72	16	6.4
13	7.1	16	32	18	54	73	343	156	2020	66	15	7.1
14	5.6	14	30	14	45	100	258	139	638	61	14	8.6
15	4.5	13	25	12	41	266	234	142	769	56	13	8.8
16	4.0	12	20	12	52	136	210	206	812	52	12	6.9
17	3.7	12	16	11	50	494	185	143	345	59	11	6.3
18	3.5	12	13	10	116	383	174	110	277	56	10	5.5
19	5.7	12	10	9.6	228	147	163	396	222	51	12	5.1
20	6.3	12	9.0	9.6	113	147	159	925	284	48	11	4.2
21	10	10	9.2	10	75	306	2250	259	1070	53	15	3.6
22	24	11	9.4	11	65	1140	2560	857	565	48	21	3.2
23	13	12	9.4	12	58	1030	715	639	297	42	15	3.4
24	8.2	13	9.4	13	52	1170	415	261	207	40	11	3.2
25	6.9	14	9.6	15	50	770	318	750	172	40	9.7	2.5
26	5.4	13	9.6	22	68	791	273	401	152	38	8.6	2.8
27	5.2	135	9.8	50	89	899	421	245	158	36	7.9	3.9
28	4.4	195	10	115	66	401	278	222	302	34	7.2	4.7
29	4.8	70	10	280	68	311	1750	183	295	33	6.5	4.6
30	9.1	50	9.8	385	---	242	4700	161	127	32	5.7	4.7
31	8.4	---	11	290	---	196	---	149	---	30	5.2	---
TOTAL	190.4	1084.7	686.2	1552.2	2517	9889	32357	10125	21995	4005	480.8	173.4
MEAN	6.14	36.2	22.1	50.1	86.8	319	1079	327	733	129	15.5	5.78
MAX	24	195	47	385	228	1170	6790	925	6290	1620	29	17
MIN	1.8	6.6	9.0	9.6	41	50	159	110	107	30	5.2	1.0
AC-FT	378	2150	1360	3080	4990	19610	64180	20080	43630	7940	954	344

CAL YR 1983 TOTAL 63675.3 MEAN 174 MAX 9220 MIN 1.8 AC-FT 126300
WTR YR 1984 TOTAL 85055.7 MEAN 232 MAX 6790 MIN 1.0 AC-FT 168700

06814500 NORTH FORK BIG NEMAHA RIVER AT HUMBOLDT, NE

LOCATION.--Lat 40°09'25", long 95°56'40", in NW1/4NE1/4 sec.10, T.2 N., R.13 E., Richardson County, Hydrologic Unit 10240008, on right pile bent of bridge on State Highway 105 at south edge of Humboldt, 800 ft downstream from Long Branch Creek.

DRAINAGE AREA.--548 mi^2.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1967 published as North Fork Nemaha River at Humboldt.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder for stages above 4.95 ft Oct. 1 to Sept. 5, complete stage record Sept. 6-30; nonrecording gage read twice daily. Datum of gage is 944.44 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1968, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--32 years, 200 ft^3/s, 144,900 acre-ft/yr; median of yearly mean discharges, 188 ft^3/s, 136,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,500 ft^3/s Aug. 13, 1982, gage height, 31.25 ft, from floodmark; maximum gage height, 31.70 ft July 10, 1958; minimum daily, 0.07 ft^3/s July 22, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 2	unknown	8550	a12.19	June 9	1800	*20400	18.95
Apr. 21	1600	6310	b10.44	June 13	0930	6860	10.90
Apr. 29	unknown	11400	a14.10	July 4	0930	9450	12.81
May 19	1600	9140	b12.60				

a From floodmark

b From observer reading

Minimum daily discharge, 24 ft^3/s Oct. 9, 17, Aug. 31, Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	31	45	46	120	73	137	1040	236	134	63	24
2	28	33	45	48	340	69	4040	620	278	123	66	75
3	28	36	39	50	400	52	5260	745	271	573	63	94
4	30	38	38	52	350	149	2280	706	222	4010	60	84
5	33	36	39	54	250	120	812	479	211	1970	66	52
6	28	33	40	54	210	89	454	371	574	592	60	47
7	30	33	36	56	200	69	304	323	485	388	54	42
8	28	33	40	58	190	42	738	289	605	264	49	49
9	24	43	35	58	190	42	706	250	6600	211	44	49
10	36	50	35	56	185	40	454	232	2260	170	44	82
11	72	46	36	56	218	50	558	218	796	146	34	66
12	62	43	37	54	239	84	1090	201	642	129	39	57
13	28	41	36	54	239	94	566	195	4700	115	44	60
14	27	38	36	54	176	91	363	182	2100	107	44	69
15	30	33	35	52	129	173	316	182	2380	107	42	57
16	27	31	34	52	126	99	297	282	1420	99	39	52
17	24	30	33	52	137	487	264	222	875	118	34	47
18	27	33	32	50	179	367	232	188	574	107	34	47
19	38	33	32	50	405	137	215	5640	487	104	39	44
20	33	34	32	50	146	218	182	2150	1280	102	57	39
21	64	38	32	50	112	275	3650	1410	1310	99	57	37
22	66	38	33	54	94	578	3010	3460	634	86	69	34
23	41	34	34	54	104	1120	1210	1940	384	79	63	37
24	43	36	35	54	79	1420	643	740	300	82	52	37
25	30	40	37	54	69	925	414	2000	225	75	37	37
26	30	38	39	58	91	1220	351	843	255	77	32	34
27	24	132	40	62	99	1460	686	509	741	77	30	34
28	27	114	42	66	69	526	434	396	361	82	28	47
29	28	70	45	70	94	426	4000	312	616	69	30	47
30	36	50	44	84	---	278	3210	271	176	75	26	47
31	34	---	44	100	---	198	---	239	---	69	24	---
TOTAL	1081	1318	1160	1762	5240	10971	36876	26635	31998	10439	1423	1527
MEAN	34.9	43.9	37.4	56.8	181	354	1229	859	1067	337	45.9	50.9
MAX	72	132	45	100	405	1460	5260	5640	6600	4010	69	94
MIN	24	30	32	46	69	40	137	182	176	69	24	24
AC-FT	2140	2610	2300	3490	10390	21760	73140	52830	63470	20710	2820	3030

CAL YR 1983 TOTAL 80536 MEAN 221 MAX 8990 MIN 17 AC-FT 159700
WTR YR 1984 TOTAL 130430 MEAN 356 MAX 6600 MIN 24 AC-FT 258700

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE

LOCATION.--Lat 40°02'08", long 95°35'45", in NE1/4SE1/4 sec.22, T.1 N., R.16 E., Richardson County, Hydrologic Unit 10240008, on right bank near upstream side of bridge on U.S. Highway 73, 1 mi south of Falls City and 13 mi upstream from mouth.

DRAINAGE AREA.--1,340 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1944 to current year. Prior to October 1967, published as Nemaha River at Falls City.

REVISED RECORDS.--WSP 1086: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 861.24 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 16, 1952, nonrecording gage and Oct. 17, 1952 to Aug. 24, 1982, water-stage recorder for stages above 6.1 ft and nonrecording gage read twice daily at site 150 ft downstream at same datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--40 years, 604 ft^3/s, 437,600 acre-ft/yr; median of yearly mean discharges, 532 ft^3/s, 385,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,600 ft^3/s Oct. 11, 1973, gage height, 31.40 ft; minimum daily discharge, 3.0 ft^3/s July 9, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 3	0900	23000	18.91	June 9	2330	*41800	26.43
Apr. 29	2130	31900	22.82	July 4	1230	23400	19.33

Minimum daily discharge, 59 ft^3/s Oct. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	106	200	140	1140	280	1030	4780	831	925	216	107
2	59	100	160	140	790	271	6160	2320	778	787	210	113
3	59	175	170	145	835	259	19700	1970	850	1100	207	166
4	59	521	180	150	747	289	13100	2090	822	10300	198	154
5	62	279	180	150	466	397	4380	1520	728	6080	212	134
6	65	151	190	150	520	386	2290	1250	1100	1950	206	116
7	63	125	200	155	518	304	1680	1120	841	1110	204	99
8	64	123	220	160	483	230	3430	1010	7770	918	232	102
9	64	180	210	170	408	210	4460	895	20300	789	220	108
10	71	679	200	160	359	200	2270	833	28900	660	193	121
11	118	455	200	155	337	205	1690	790	5770	509	169	150
12	121	219	190	150	364	220	4010	735	2160	558	159	125
13	131	181	130	150	392	250	2260	709	10200	500	161	120
14	98	159	140	150	339	328	1480	666	5900	465	153	142
15	84	143	150	145	276	552	1250	624	7120	426	149	127
16	81	130	150	140	312	600	1240	792	7920	395	143	118
17	77	124	150	140	382	1070	1050	791	2400	419	133	115
18	74	122	145	135	351	1630	925	643	1770	399	132	111
19	91	144	140	135	774	894	856	6460	1370	363	137	108
20	95	147	140	130	603	582	816	7230	1680	332	132	107
21	115	144	135	130	395	801	6110	2730	2760	332	147	102
22	170	142	130	135	334	2950	10400	4740	5030	325	164	99
23	196	138	130	140	302	4950	4250	4840	2080	308	165	101
24	126	132	130	150	274	4730	2220	1940	1270	290	138	102
25	104	132	130	160	259	5070	1600	3190	970	294	122	94
26	94	136	135	180	280	3480	1330	2920	805	283	113	94
27	91	464	135	220	331	5630	2050	1550	1230	275	106	101
28	85	2240	135	300	311	2640	1820	1310	1530	269	103	109
29	83	764	140	1130	269	2080	11000	1120	7240	258	99	113
30	90	364	140	2220	---	1540	19000	981	1680	243	94	116
31	94	---	140	1870	---	1180	---	893	---	230	93	---
TOTAL	2846	8919	4975	9585	13151	44208	133857	63442	133805	32192	4910	3474
MEAN	91.8	297	160	309	453	1426	4462	2047	4460	1038	158	116
MAX	196	2240	220	2220	1140	5630	19700	7230	28900	10300	232	166
MIN	59	100	130	130	259	200	816	624	728	230	93	94
AC-FT	5650	17690	9870	19010	26090	87690	265500	125800	265400	63850	9740	6890

CAL YR 1983 TOTAL 271944 MEAN 745 MAX 15900 MIN 50 AC-FT 539400
WTR YR 1984 TOTAL 455364 MEAN 1244 MAX 28900 MIN 59 AC-FT 903200

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951, 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT											
12...	1730	118	670	7.9	14.0	11.0	16	2300	960	290	79
NOV											
08...	1600	127	655	8.3	13.0	10.2	27	4500	14000	270	77
DEC											
07...	0830	246	755	8.0	.5	12.8	58	3000	50000	330	95
JAN											
04...	1600	150	800	7.8	.0	12.2	14	570	K230	350	100
FEB											
02...	0900	827	407	7.7	.0	14.1	50	K1900	32000	150	45
MAR											
01...	1200	261	725	8.1	3.5	15.4	27	K64	K100	310	91
APR											
04...	1600	11700	250	7.6	6.5	11.8	200	8000	K550000	100	31
MAY											
02...	1520	2100	525	7.9	13.0	10.7	74	2900	13000	220	67
31...	1230	903	642	7.8	18.0	9.6	29	970	640	310	92
JUL											
11...	1245	962	639	7.8	26.0	7.9	33	K1300	1800	310	94
AUG											
22...	0930	152	600	8.2	22.5	10.2	160	K110	1200	230	56
SEP											
19...	1500	107	690	8.2	26.0	11.6	30	K40	180	240	63

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
12...	22	96	31	33	.70	.040	.96	1.0	1.7	.160	3.7
NOV											
08...	18	79	29	95	1.4	.120	1.6	1.7	3.1	.310	6.5
DEC											
07...	23	90	34	772	3.5	.220	5.8	6.0	9.5	.860	16
JAN											
04...	24	98	28	14	3.5	.160	1.0	1.2	4.7	.220	2.6
FEB											
02...	10	38	16	592	2.2	.390	1.1	1.5	3.7	.610	12
MAR											
01...	21	85	28	88	2.6	.030	.87	.90	3.5	.230	3.9
APR											
04...	5.6	27	4.7	3730	2.2	.260	9.7	10	12	1.50	57
MAY											
02...	14	51	10	1320	3.5	.040	3.5	3.5	7.0	1.40	7.9
31...	20	65	13	241	3.6	.020	1.8	1.8	5.4	.210	6.0
JUL											
11...	19	66	15	239	3.6	.030	.77	.80	4.4	.390	6.4
AUG											
22...	22	92	30	45	.70	.070	1.4	1.5	2.2	.190	6.4
SEP											
19...	21	93	32	20	.70	.020	.68	.70	1.4	.110	3.7

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
OCT 12...	1730	--	38	1	--	--	--	--	--	--
NOV 08...	1600	40	35	1	5.2	227	.30	13	390	.53
DEC 07...	0830	--	38	.9	--	--	--	--	--	--
JAN 04...	1600	--	38	.9	--	--	--	--	--	--
FEB 02...	0900	12	19	.7	4.8	142	.30	11	230	.31
MAR 01...	1200	--	37	.9	--	--	--	--	--	--
APR 04...	1600	--	9.4	.4	--	--	--	--	--	--
MAY 02...	1820	26	17	.5	4.3	169	.30	14	300	.40
31...	1230	--	26	.7	--	--	--	--	--	--
JUL 11...	1245	--	25	.6	--	--	--	--	--	--
AUG 22...	0930	38	38	1	3.6	193	.30	10	370	.50
SEP 19...	1500	--	40	1	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
OCT 12...	--	--	--	--	--	--	--	--	--	--
NOV 08...	135	1.4	.190	6	300	70	1	10	8	5900
DEC 07...	--	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--	--
FEB 02...	512	2.2	.180	5	200	30	<1	20	16	12000
MAR 01...	--	--	--	--	--	--	--	--	--	--
APR 04...	--	--	--	--	--	--	--	--	--	--
MAY 02...	1080	3.5	.140	6	500	40	<1	50	39	41000
31...	--	--	--	--	--	--	--	--	--	--
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 22...	161	.57	<.010	2	100	80	<1	<10	5	1800
SEP 19...	--	--	--	--	--	--	--	--	--	--

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT 12...	--	--	--	--	--	--	--	--	--	--
NOV 08...	5900	9	4	360	350	9	<.1	2	<1	50
DEC 07...	--	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--	--
FEB 02...	12000	120	10	540	520	24	<.1	2	<1	60
MAR 01...	--	--	--	--	--	--	--	--	--	--
APR 04...	--	--	--	--	--	--	--	--	--	--
MAY 02...	41000	32	24	970	960	10	.1	3	<1	150
31...	--	--	--	--	--	--	--	--	--	--
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 22...	--	10	<1	220	--	5	.6	2	<1	80
SEP 19...	--	--	--	--	--	--	--	--	--	--

06821500 ARIKAREE RIVER AT HAIGLER, NE

LOCATION.--Lat 40°01'45", long 101°58'10", in NE1/4NE1/4 sec.29, T.1 N., R.41 W., Dundy County, Hydrologic Unit 10250001, on right bank at downstream side of bridge on U.S. Highway 34, 1.3 mi upstream from Burlington Northern Inc. bridge, 1.8 mi upstream from confluence with North Fork Republican River, 2 mi northwest of Haigler, and 3.2 mi downstream from Kansas-Nebraska State line.

DRAINAGE AREA.--1,640 mi^2, approximately, of which about 980 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1919: 1951, 1954, 1956, 1960. WSP 2119: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3,250.98 ft National Geodetic Vertical Datum of 1929. See WSP 1919 for history of changes prior to Sept. 29, 1964. Sept. 29, 1964 to Apr. 25, 1982 on left bank 57 ft downstream from bridge at present datum.

REMARKS.--Records poor. Natural flow affected by ground-water withdrawals and diversions for irrigation of about 1,500 ft^3/s in Colorado and by return flow from Pioneer Canal.

AVERAGE DISCHARGE.--53 years, 22.7 ft^3/s, 16,450 acre-ft/yr; median of yearly mean discharges, 18 ft^3/s, 13,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft^3/s May 31, 1935, gage height, 11.2 ft, site and datum then in use, from floodmarks, from rating curve extended above 3,800 ft^3/s on basis of slope-area measurement of peak flow; no flow for some periods in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 204 ft^3/s Apr. 21, gage height, 6.63 ft, no peak above base of 800 ft^3/s; minimum daily, 0.36 ft^3/s Nov. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1933 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	1.6	1.2	1.0	1.9	17	27	80	12	4.1	1.7	1.6
2	.48	1.6	1.2	1.0	2.2	17	31	79	20	4.9	2.5	1.2
3	.50	1.6	1.2	1.1	2.4	17	34	75	16	2.8	3.1	1.1
4	1.3	1.7	1.3	1.2	2.5	16	36	53	29	2.6	3.3	1.4
5	1.8	2.0	1.3	1.3	2.5	14	51	53	28	2.6	1.5	1.6
6	1.3	1.9	1.2	1.4	3.1	16	50	61	15	3.0	1.1	2.8
7	1.4	2.4	1.3	1.4	3.7	17	55	55	8.3	2.8	1.9	2.4
8	1.6	2.8	1.3	1.4	4.8	16	51	44	6.2	3.3	2.9	4.7
9	1.4	2.6	1.3	1.4	5.4	17	48	40	6.0	3.4	2.6	3.0
10	1.1	1.8	1.3	1.5	6.5	16	57	37	5.2	2.6	2.4	1.8
11	1.0	1.8	1.3	1.5	7.6	17	52	34	21	2.8	1.8	1.2
12	.86	1.8	1.4	1.5	7.0	17	40	32	21	2.9	1.2	1.2
13	1.1	1.8	1.4	1.4	9.1	16	32	31	21	2.7	.49	1.8
14	1.1	1.8	1.5	1.2	9.0	12	28	27	19	2.7	1.4	3.2
15	.98	1.6	1.4	1.2	8.4	10	27	26	15	2.3	1.9	5.2
16	1.1	1.7	1.4	1.4	6.7	9.9	27	23	14	2.5	2.4	8.1
17	1.3	1.8	1.4	1.4	8.7	11	26	22	18	3.4	1.4	8.2
18	1.4	1.7	1.4	1.5	3.2	9.1	25	27	16	2.9	.66	6.1
19	1.6	1.8	1.4	1.4	3.8	14	24	25	14	3.0	.96	3.5
20	1.8	1.6	1.3	1.3	3.7	27	89	24	14	3.2	1.9	3.4
21	1.9	1.7	1.2	1.4	3.9	25	179	20	12	2.8	3.2	3.5
22	1.6	1.7	1.1	1.4	8.4	24	135	18	14	2.4	2.9	3.5
23	1.8	1.6	.99	1.4	21	23	81	17	14	2.6	1.3	2.9
24	1.8	1.7	.98	1.3	16	23	60	15	16	2.6	1.4	2.3
25	1.8	1.6	1.0	1.0	17	23	53	14	14	2.3	1.6	2.5
26	1.9	1.6	1.0	1.1	15	23	43	15	12	3.4	1.4	2.7
27	1.7	.79	1.0	1.7	14	22	38	15	8.4	3.5	1.7	2.7
28	1.5	.36	1.0	1.9	11	22	34	12	4.7	3.0	1.8	3.7
29	1.7	.36	.99	2.1	15	22	50	13	3.0	2.8	1.5	3.5
30	2.0	1.0	.88	1.6	---	22	63	12	3.2	1.6	1.6	3.4
31	2.4	---	.94	1.6	---	28	---	11	---	1.3	1.6	---
TOTAL	43.71	49.81	37.58	43.0	223.5	563.0	1546	1010	420.0	88.8	57.11	94.2
MEAN	1.41	1.66	1.21	1.39	7.71	18.2	51.5	32.6	14.0	2.86	1.84	3.14
MAX	2.4	2.8	1.5	2.1	21	28	179	80	29	4.9	3.3	8.2
MIN	.48	.36	.88	1.0	1.9	9.1	24	11	3.0	1.3	.49	1.1
AC-FT	87	99	75	85	443	1120	3070	2000	833	176	113	187

CAL YR 1983 TOTAL 3846.30 MEAN 10.5 MAX 218 MIN .36 AC-FT 7630
WTR YR 1984 TOTAL 4176.71 MEAN 11.4 MAX 179 MIN .36 AC-FT 8280

06823000 NORTH FORK REPUBLICAN RIVER AT COLORADO-NEBRASKA STATE LINE

LOCATION.--Lat 40°04'10", long 102°03'05", in sec.10, T.1 N., R.42 W., Dundy County, Nebraska, Hydrologic Unit 10250002, on right bank 100 ft east of Colorado-Nebraska State line and 9.5 mi upstream from confluence with Arikaree River.

DRAINAGE AREA.--1,360 mi², approximately, of which about 100 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1932, published as North Fork of Arikaree River at Colorado-Nebraska State line. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1240: 1947(M). WSP 1390: 1934. WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Steel piling control since January 1965. Datum of gage is 3,336.09 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1934, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are fair. Natural flow affected by diversion in Pioneer Canal for irrigation of about 2,700 acres in Colorado and Nebraska.

AVERAGE DISCHARGE.--54 years, 47.3 ft³/s, 34,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft³/s Apr. 28, 1947, gage height, 5.92 ft, from rating curve extended above 800 ft³/s on basis of slope-area measurement of peak flow; no flow Aug. 25, 26, 1932.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 142 ft³/s Apr. 21 at 2200, gage height, 1.63 ft, no other peak above base of 130 ft³/s; maximum gage height, 3.03 ft Dec. 1, backwater from ice; minimum daily discharge, 6.9 ft³/s Sept. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	27	22	70	66	69	72	92	23	10	12	8.8
2	22	23	40	80	65	70	77	96	24	9.5	14	9.8
3	22	24	46	74	63	71	74	96	23	9.7	12	9.8
4	22	24	44	80	62	71	75	90	21	11	11	8.6
5	22	23	54	86	62	69	80	103	27	10	9.9	7.5
6	22	24	48	74	63	68	80	103	43	9.7	11	6.9
7	22	25	46	61	64	68	79	91	41	11	13	6.9
8	23	31	60	62	62	67	74	83	40	12	13	7.4
9	26	67	62	62	64	67	69	79	41	9.8	12	7.4
10	22	70	70	61	63	68	75	76	39	9.4	11	7.3
11	22	71	64	61	66	71	73	71	40	9.7	11	9.1
12	22	72	62	61	66	73	69	67	28	8.7	11	9.4
13	22	72	62	59	64	69	65	67	29	7.2	9.7	10
14	22	74	61	54	66	66	64	66	30	7.3	9.6	11
15	22	75	60	40	68	62	63	63	30	7.0	9.6	12
16	22	75	58	38	67	64	64	61	28	7.0	11	12
17	22	75	52	41	66	64	63	58	23	7.2	11	14
18	24	76	30	24	64	66	63	56	22	9.5	10	14
19	23	79	31	23	70	70	62	58	24	9.3	10	13
20	23	75	35	35	67	77	91	57	21	9.2	10	14
21	23	75	25	34	66	76	128	56	22	8.4	10	12
22	25	77	18	45	69	71	122	54	19	7.3	10	13
23	24	77	20	54	71	68	102	50	15	7.8	9.5	15
24	26	76	21	64	70	67	92	52	15	8.8	9.1	15
25	25	79	35	80	71	67	89	51	15	8.8	11	16
26	25	70	42	94	72	67	86	53	13	9.0	9.4	17
27	26	45	54	76	71	66	83	54	11	9.8	7.9	18
28	27	30	48	67	68	64	81	51	9.1	9.1	8.8	19
29	26	33	43	72	68	63	87	47	8.6	8.9	8.7	22
30	28	20	45	69	---	64	93	44	11	9.2	8.7	22
31	29	---	52	65	---	70	---	41	---	11	8.3	---
TOTAL	728	1664	1410	1866	1924	2113	2395	2086	735.7	282.3	323.2	367.9
MEAN	23.5	55.5	45.5	60.2	66.3	68.2	79.8	67.3	24.5	9.11	10.4	12.3
MAX	29	79	70	94	72	77	128	103	43	12	14	22
MIN	17	20	18	23	62	62	62	41	8.6	7.0	7.9	6.9
AC-FT	1440	3300	2800	3700	3820	4190	4750	4140	1460	560	641	730

CAL YR 1983 TOTAL 15632.1 MEAN 42.8 MAX 97 MIN 7.3 AC-FT 31010
WTR YR 1984 TOTAL 15895.1 MEAN 43.4 MAX 128 MIN 6.9 AC-FT 31530

06823500 BUFFALO CREEK NEAR HAIGLER, NE

LOCATION.--Lat 40°02'22", long 101°51'57", in SE1/4NW1/4 sec.20, T.1 N., R.40 W., Dundy County, Hydrologic Unit 10250002, on left bank 10 ft upstream from county highway bridge, 0.4 mi upstream from mouth, and 4 mi northeast of Haigler.

DRAINAGE AREA.--260 mi^2, approximately, of which about 13 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 2119: 1948-50(M), 1957(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,188.90 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1980, at site 0.5 mi upstream at datum 15.67 ft higher.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by diversion about 1 mi upstream for irrigation of 880 acres.

AVERAGE DISCHARGE.--44 years, 7.49 ft^3/s, 5,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 140 ft^3/s June 27, 1948, gage height, 4.37 ft, site and datum then in use; minimum gage height, 5.93 ft Jan. 3, 1976, site and datum then in use, backwater from ice; no flow at times in 1955, 1968, 1973-80, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	1700	ice jam	*3.97	Apr. 6	2215	*35	3.22
Feb. 22	0015	20	2.93	Apr. 21	1600	23	2.92
Apr. 3	1930	31	3.14	May 6	1145	20	2.83

No flow July 18-20, July 23 to Aug. 1, Aug. 27, 29-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	5.4	1.2	6.8	7.0	10	8.0	15	8.6	1.2	.00	.01
2	3.8	5.4	1.6	7.1	9.0	9.9	8.2	15	8.3	1.2	.61	.02
3	4.5	5.4	2.2	7.1	8.6	9.5	11	14	8.4	.95	1.1	.07
4	4.7	5.4	2.1	7.5	8.6	9.7	22	12	11	.94	.90	.03
5	5.1	5.4	3.5	7.8	8.0	9.5	16	15	11	.83	.76	.01
6	5.0	5.4	3.0	8.5	7.4	8.9	14	18	9.2	.60	.38	.02
7	5.1	5.3	3.1	9.1	7.4	8.8	17	15	9.1	.40	.13	.16
8	5.1	5.5	5.6	9.4	7.4	8.3	12	12	9.0	.30	.08	.54
9	5.3	5.7	8.2	10	7.4	8.2	10	12	9.1	.20	.08	.65
10	5.5	5.8	7.2	9.3	8.0	8.2	9.1	12	8.9	.10	.08	.61
11	5.2	5.8	7.6	10	8.4	8.4	9.2	11	11	.08	.08	.53
12	5.0	6.0	7.9	8.7	8.9	8.0	8.5	11	9.7	.06	.08	1.3
13	5.2	6.0	7.2	8.3	9.1	8.1	8.3	11	9.0	.05	.08	2.2
14	5.2	5.8	6.9	7.1	8.9	8.2	8.1	11	8.5	.04	.08	1.8
15	5.0	5.8	7.0	6.0	9.3	8.1	8.3	11	8.0	.03	.07	1.5
16	5.2	5.8	6.5	5.6	9.1	7.8	8.3	11	7.2	.02	.07	1.6
17	5.2	5.8	6.2	6.0	8.9	7.8	8.4	10	6.8	.01	.08	1.6
18	5.2	5.6	5.2	4.0	4.3	7.5	8.4	11	7.2	.00	.08	1.5
19	5.2	5.8	5.0	2.3	2.7	5.2	8.5	11	7.2	.00	.10	1.4
20	5.2	5.8	5.2	2.8	7.0	7.9	13	9.8	4.2	.00	.10	1.4
21	5.2	5.8	3.0	3.0	15	9.3	21	10	.88	.05	.10	1.7
22	5.2	6.1	1.5	4.5	19	9.5	19	9.7	2.8	.02	.08	2.0
23	5.2	5.8	2.0	5.2	17	9.1	13	9.3	4.8	.00	.37	2.0
24	5.2	7.0	2.6	5.6	15	8.9	12	9.2	4.2	.00	.57	2.6
25	5.4	6.7	3.3	5.8	12	8.6	11	9.2	4.1	.00	1.3	2.5
26	5.6	5.6	4.5	6.2	11	8.6	11	9.2	4.1	.00	1.0	2.3
27	5.6	4.0	6.6	6.4	11	8.6	10	9.0	4.0	.00	.00	4.6
28	5.4	2.5	6.4	6.8	10	8.2	10	8.7	3.9	.00	.01	6.3
29	5.4	1.3	6.5	4.8	10	8.2	12	8.5	3.8	.00	.00	6.6
30	5.4	.80	7.2	4.4	---	8.0	14	8.6	2.1	.00	.00	6.5
31	5.4	---	6.7	6.0	---	8.0	---	8.5	---	.00	.00	---
TOTAL	158.5	158.50	152.7	202.1	275.4	263.0	349.3	347.7	206.08	7.08	8.37	54.05
MEAN	5.11	5.28	4.93	6.52	9.50	8.48	11.6	11.2	6.87	.23	.27	1.80
MAX	5.6	7.0	8.2	10	19	10	22	18	11	1.2	1.3	6.6
MIN	3.8	.80	1.2	2.3	2.7	5.2	8.0	8.5	.88	.00	.00	.01
AC-FT	314	314	303	401	546	522	693	690	409	14	17	107

CAL YR 1983 TOTAL 2130.08 MEAN 5.84 MAX 13 MIN .23 AC-FT 4230
WTR YR 1984 TOTAL 2182.78 MEAN 5.96 MAX 22 MIN .00 AC-FT 4330

06824000 ROCK CREEK AT PARKS, NE

LOCATION.--Lat 40°02'30", long 101°43'40", in SW1/4NE1/4 sec.21, T.1 N., R.39 W., Dundy County, Hydrologic Unit 10250002, on right bank at west edge of Parks, 100 ft downstream from county road bridge and 0.5 mi upstream from mouth.

DRAINAGE AREA.--20 mi^2, approximately, of which about 17 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1630: 1951(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,093.35 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. One diversion about 2 mi above station for irrigation of 215 acres; flow regulated at times by reservoir at State fish hatchery 7 mi upstream.

AVERAGE DISCHARGE.--44 years, 13.8 ft^3/s, 10,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 493 ft^3/s July 5, 1965, gage height, 6.00 ft, from rating curve extended above 40 ft^3/s on basis of slope-conveyance study; minimum daily, 2.6 ft^3/s Nov. 19, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 25 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 29	0945	ice jam	*3.22	July 1	0400	25	1.98
Apr. 21	0345	*29	2.18				

Minimum daily discharge, 6.0 ft^3/s Dec. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	11	7.6	14	13	13	12	18	12	23	9.4	11
2	10	11	8.6	14	13	13	13	20	11	18	9.6	11
3	10	11	10	14	13	13	16	17	11	22	9.5	10
4	10	11	8.8	14	12	13	16	14	13	19	9.4	11
5	9.9	11	9.0	14	12	13	15	17	13	14	9.3	10
6	9.9	11	7.8	14	12	13	14	21	11	12	8.8	10
7	10	11	9.4	14	12	12	18	18	11	11	9.0	10
8	11	11	11	14	12	12	16	15	11	11	8.9	11
9	11	12	10	14	12	12	14	14	11	11	8.9	10
10	11	12	12	13	12	12	13	13	11	10	8.7	10
11	11	12	15	13	12	11	13	13	13	10	8.6	11
12	11	11	14	13	12	11	11	13	13	9.8	8.4	10
13	12	11	13	13	12	11	9.7	12	12	9.5	8.4	9.9
14	12	12	12	13	12	11	9.5	12	11	9.5	8.4	11
15	11	12	11	12	13	11	9.5	12	11	9.5	8.4	11
16	11	12	11	12	13	12	9.6	12	11	9.5	8.5	10
17	11	12	9.0	10	13	12	9.8	12	11	9.5	8.4	10
18	11	12	8.0	7.0	11	12	9.9	12	11	9.4	8.4	11
19	11	12	8.4	8.6	12	14	10	13	11	9.3	8.4	11
20	11	12	8.0	8.0	13	14	17	13	11	9.2	8.7	11
21	12	12	7.0	9.0	15	15	28	12	11	9.2	9.2	11
22	12	12	6.0	9.4	17	14	22	12	11	8.9	9.2	10
23	12	13	7.0	10	17	13	18	12	11	8.8	9.1	9.6
24	11	14	6.8	10	17	12	15	12	11	8.9	9.1	9.6
25	11	13	7.8	11	16	12	13	12	11	9.1	9.3	9.6
26	11	13	9.6	13	16	12	13	12	11	9.3	9.2	9.6
27	11	7.2	10	13	15	12	12	12	15	9.3	8.9	9.6
28	11	7.0	9.4	13	15	12	12	12	13	9.2	8.9	9.9
29	11	7.4	9.0	14	14	11	13	12	19	9.2	9.1	10
30	11	6.8	11	14	---	11	16	12	18	9.2	9.4	11
31	11	---	14	13	---	12	---	12	---	9.2	9.6	---
TOTAL	338.8	335.4	301.2	378.0	388	381	418.0	423	361	346.5	277.1	309.8
MEAN	10.9	11.2	9.72	12.2	13.4	12.3	13.9	13.6	12.0	11.2	8.94	10.3
MAX	12	14	15	14	17	15	28	21	19	23	9.6	11
MIN	9.9	6.8	6.0	7.0	11	11	9.5	12	11	8.8	8.4	9.6
AC-FT	672	665	597	750	770	756	829	839	716	687	550	614

CAL YR 1983 TOTAL 4020.1 MEAN 11.0 MAX 20 MIN 6.0 AC-FT 7970
WTR YR 1984 TOTAL 4257.8 MEAN 11.6 MAX 28 MIN 6.0 AC-FT 8450

06824500 REPUBLICAN RIVER AT BENKELMAN, NE

LOCATION.--Lat 40°01'55", long 101°32'30", in SE1/4SW1/4 sec.19, T.1 N., R.37 W., Dundy County, Hydrologic Unit 10250002, on left bank at downstream side of bridge on U.S. Highway 34, 0.6 mi south of Burlington Northern Inc. track, 1 mi southwest of Benkelman, 2 mi upstream from South Fork Republican River, and 11 mi downstream from Rock Creek.

DRAINAGE AREA.--4,830 mi², approximately, of which about 1,230 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to September 1895 (published as North Fork Republican River at Benkelman), October 1902 to November 1906, October 1946 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1895. WSP 1919: 1952, 1956. WSP 2119: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,975.34 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 17, 1946, nonrecording gages at several sites within 1.5 mi of present site at various datums; Dec. 17, 1946, to May 26, 1972, water-stage recorder at present site and datum and May 27, 1972, to Aug 11, 1978, at site 150 ft downstream at same datum.

REMARKS.--Records poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--43 years, 87.3 ft³/s, 63,250 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,040 ft³/s Sept. 7, 1951, gage height, 7.58 ft; maximum gage height, 7.80 ft Aug. 9, 1950; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1826, 13.1 ft May 31, 1935, from elevations furnished by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 350 ft³/s Apr. 21, gage height, 4.28 ft; maximum gage height, 4.69 ft Jan. 29, backwater from ice; no peak above base of 550 ft³/s; minimum daily discharge, no flow Aug. 18-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	47	46	72	112	123	124	260	72	35	1.7	1.4
2	24	47	54	66	130	119	144	285	57	38	1.7	1.4
3	25	44	52	64	120	120	145	270	58	33	1.7	1.8
4	27	44	50	68	114	111	155	230	85	41	2.8	1.8
5	28	44	56	70	110	97	185	245	69	31	2.2	1.8
6	29	43	45	74	108	87	190	320	65	27	1.4	2.3
7	28	44	43	72	120	96	220	270	70	25	1.6	2.3
8	28	48	56	70	110	92	185	210	62	25	1.8	2.3
9	28	55	64	72	110	86	168	185	60	24	1.7	3.0
10	31	68	66	70	106	86	164	180	61	23	1.7	3.0
11	30	69	86	70	110	94	176	172	102	21	1.7	3.5
12	30	72	90	66	107	92	158	165	101	18	.91	11
13	31	75	94	56	96	95	146	164	77	8.5	.74	7.4
14	35	69	84	52	101	96	140	164	84	3.3	.47	16
15	37	67	70	54	106	102	128	155	71	4.5	.49	18
16	37	67	58	56	96	94	125	140	69	8.1	.37	19
17	37	70	56	60	91	88	125	134	70	5.8	.05	19
18	38	72	43	45	300	98	124	136	65	4.6	.00	19
19	39	73	44	44	270	125	126	142	59	2.7	.00	19
20	39	81	41	50	200	164	180	136	55	2.5	.00	19
21	40	80	38	50	170	168	310	134	49	2.8	.00	19
22	42	77	35	60	180	145	275	128	43	1.6	.00	19
23	42	76	40	74	137	132	245	124	45	1.3	.00	19
24	42	74	40	86	149	136	245	116	47	1.4	.00	19
25	42	80	45	100	136	134	210	108	47	1.5	1.7	19
26	43	86	56	104	141	128	195	105	50	1.5	1.9	19
27	44	70	70	108	130	125	180	102	44	1.5	1.1	20
28	44	46	62	112	107	112	168	94	42	1.7	.95	22
29	44	48	54	116	103	110	180	86	36	1.7	.67	24
30	44	45	58	112	---	110	230	84	35	1.7	.97	24
31	45	---	66	110	---	122	---	80	---	1.7	1.4	---
TOTAL	1098	1861	1762	2283	3870	3487	5346	5124	1850	399.4	31.72	376.0
MEAN	35.4	62.7	56.8	73.6	133	112	178	165	61.7	12.9	1.02	12.5
MAX	45	86	94	116	300	168	310	320	102	41	2.8	24
MIN	24	43	35	44	91	86	124	80	35	1.3	.00	1.4
AC-FT	2180	3730	3490	4530	7680	6920	10600	10160	3670	792	63	746

CAL YR 1983 TOTAL 26392.11 MEAN 72.3 MAX 650 MIN .00 AC-FT 52350
WTR YR 1984 TOTAL 27508.12 MEAN 75.2 MAX 320 MIN .00 AC-FT 54560

06824500 REPUBLICAN RIVER AT BENKELMAN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-73, October 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT											
14...	1035	29	540	8.4	9.0	9.6	22	140	740	240	62
NOV											
14...	1030	69	510	--	4.0	10.4	27	100	1200	220	60
DEC											
13...	1300	95	550	7.7	.0	7.3	25	67	700	220	58
JAN											
16...	1445	21	555	7.7	.0	8.3	--	61	180	200	54
FEB											
10...	0935	108	--	7.9	1.5	11.2	35	K27	K28000	250	72
MAR											
01...	0935	120	595	8.2	10.0	5.2	23	70	240	230	61
APR											
11...	1100	179	--	8.0	10.5	5.6	24	160	1700	280	71
MAY											
02...	1300	292	--	8.0	8.5	7.8	33	1400	1700	290	73
31...	1230	27	610	8.2	26.5	6.2	43	130	88	250	66
JUL											
06...	1000	28	725	8.2	25.5	6.4	32	87	48000	270	67
AUG											
14...	1215	.50	680	8.7	27.5	7.2	180	560	960	220	50
SEP											
11...	1240	4.0	560	--	18.0	7.6	30	710	600	200	49

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
14...	20	100	7.4	33	.80	.060	.94	1.0	1.8	.040	15
NOV											
14...	18	66	11	61	1.2	.080	1.2	1.3	2.5	.090	4.7
DEC											
13...	19	70	9.6	27	1.2	.090	.51	.60	1.8	.060	3.6
JAN											
16...	17	71	7.8	7	1.4	.120	.18	.30	1.7	.050	--
FEB											
10...	18	68	7.3	141	1.1	.020	1.2	1.2	2.3	.200	7.6
MAR											
01...	18	77	28	105	1.0	.350	.55	.90	1.9	.130	4.9
APR											
11...	24	99	9.9	157	.70	<.010	--	.80	1.5	.230	6.0
MAY											
02...	27	190	19	96	.60	.080	1.1	1.2	1.8	.150	8.8
31...	21	120	10	107	.90	.010	.89	.90	1.8	.160	6.1
JUL											
06...	24	180	12	73	.50	.140	.96	1.1	1.6	.140	7.9
AUG											
14...	22	140	18	17	<.10	.040	1.1	1.1	--	.090	8.9
SEP											
11...	20	110	10	35	<.10	.020	.78	.80	--	.060	4.6

06824500 REPUBLICAN RIVER AT BENKELMAN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
NOV										
14...	1030	19	24	.7	12	205	1.1	49	360	.50
FEB										
10...	0935	53	25	.7	11	201	1.0	44	370	.50
MAY										
02...	1300	57	59	2	17	237	1.5	36	560	.77
AUG										
14...	1215	34	47	1	18	182	1.2	50	460	.62

DATE	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
NOV										
14...	68	1.1	.010	11	<100	90	1	<10	12	1600
FEB										
10...	107	1.3	.040	--	--	90	--	--	--	--
MAY										
02...	445	.64	.090	8	200	120	<1	<10	5	2500
AUG										
14...	.61	.10	.020	--	--	120	--	--	--	--

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE) (01044)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN) (01054)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
NOV										
14...	1600	28	12	120	120	3	.2	3	2	50
FEB										
10...	--	90	--	--	--	90	--	--	--	--
MAY										
02...	2500	20	<1	120	110	15	3.2	2	<1	30
AUG										
14...	--	7	--	--	--	45	--	--	--	--

06827500 SOUTH FORK REPUBLICAN RIVER NEAR BENKELMAN, NE

LOCATION.--Lat 40°00'34", long 101°32'32", in NE1/4SW1/4 sec.31, T.1 N., R.37 W., Dundy County, Hydrologic Unit 10250003, on right bank 100 ft upstream from bridge on State Highway 61, 1 mi downstream from Kansas-Nebraska State line, 2.5 mi southwest of Benkelman, and 4 mi upstream from mouth.

DRAINAGE AREA.--2,740 mi^2, approximately, of which about 2,190 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to September 1895, October 1902 to November 1906, October 1930 to September 1932, August 1937 to current year. Published as South Fork of Republican River at Benkelman prior to 1906 and as Republican River at Benkelman 1931-32. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1904-6, 1931. WSP 1390: 1940, 1945, 1947. WSP 1919: 1951-52, 1954-56. WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,990.91 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 10, 1947, nonrecording gages at several sites within 3.5 mi of present site at various datums. Dec. 10, 1947, to Sept. 28, 1966, water-stage recorder 130 ft downstream at datum 2.00 ft higher, and Sept. 29, 1966, to Mar. 7, 1968, at present site at datum 2.00 ft higher.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station, and since July 6, 1950, by storage in Bonny Reservoir.

AVERAGE DISCHARGE.--54 years, 49.7 ft^3/s, 36,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge determined, 19,600 ft^3/s Aug. 16, 1958, gage height, 8.70 ft, site and datum then in use, but may have been higher during flood of June 24, 1945; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1923, 10.1 ft May 31, 1935, from floodmarks at site 0.2 mi downstream, at datum 2.00 ft higher, discharge, 150,000 ft^3/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 268 ft^3/s May 3, gage height, 3.73 ft; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	2.2	80	47	49	158	50	5.2	.00	.00
2	.00	.00	.00	5.0	90	49	52	196	47	6.6	.00	.00
3	.00	.00	.00	4.5	80	50	56	240	46	5.7	.00	.00
4	.00	.00	.00	15	74	49	59	199	43	8.7	.00	.00
5	.00	.00	.00	34	70	49	67	182	40	7.9	.00	.00
6	.00	.00	.00	33	68	47	69	195	40	5.7	.00	.00
7	.00	.00	.00	32	70	47	83	189	35	4.0	.00	.00
8	.00	.00	.00	30	66	42	83	163	31	3.2	.00	.00
9	.00	.00	.00	30	70	44	71	154	31	2.5	.00	.00
10	.00	.00	.00	25	64	41	68	136	29	1.9	.00	.00
11	.00	.00	25	26	62	42	67	113	46	.90	.00	.00
12	.00	.32	28	24	58	40	62	103	44	.52	.00	.00
13	.00	2.5	30	9.0	55	40	58	98	37	.16	.00	.00
14	.00	2.8	25	8.0	54	39	53	90	30	.03	.00	.00
15	.00	3.6	15	7.0	53	39	52	84	29	.02	.00	.00
16	.00	4.5	9.0	6.0	54	37	49	79	26	.00	.00	.00
17	.00	4.8	6.0	8.0	52	39	49	75	34	.01	.00	.00
18	.00	5.5	1.2	3.0	74	34	43	77	24	.00	.00	.00
19	.00	6.5	1.1	1.0	60	40	63	72	20	.00	.00	.00
20	.00	9.3	1.5	1.4	52	60	107	70	20	.00	.00	.00
21	.00	11	1.0	1.2	50	64	159	68	20	.00	.00	.00
22	.00	9.9	.60	4.0	56	65	181	67	17	.00	.00	.00
23	.00	8.0	.70	10	66	60	162	65	13	.00	.00	.00
24	.00	5.0	.70	40	60	57	144	63	13	.00	.00	.00
25	.00	6.0	.80	60	54	56	152	61	11	.00	.00	.00
26	.00	7.0	1.3	64	56	57	154	63	10	.00	.00	.00
27	.00	2.5	2.0	66	48	52	147	60	9.7	.00	.00	.00
28	.00	.07	1.5	68	46	49	133	55	9.7	.00	.00	.00
29	.00	.00	1.0	74	45	44	130	55	7.8	.00	.00	.00
30	.00	.00	1.2	70	---	45	131	55	6.0	.00	.00	.00
31	.00	---	1.5	70	---	49	---	54	---	.00	.00	---
TOTAL	.00	89.29	154.10	831.3	1787	1473	2753	3339	819.2	53.04	.00	.00
MEAN	.00	2.98	4.97	26.8	61.6	47.5	91.8	108	27.3	1.71	.00	.00
MAX	.00	11	30	74	90	65	181	240	50	8.7	.00	.00
MIN	.00	.00	.00	1.0	45	34	43	54	6.0	.00	.00	.00
AC-FT	.00	177	306	1650	3540	2920	5460	6620	1620	105	.00	.00

CAL YR 1983 TOTAL 8079.58 MEAN 22.1 MAX 97 MIN .00 AC-FT 16030
WTR YR 1984 TOTAL 11298.93 MEAN 30.9 MAX 240 MIN .00 AC-FT 22410

06828500 REPUBLICAN RIVER AT STRATTON, NE

LOCATION.--Lat 40°08'28", long 101°13'42", in SW1/4NW1/4 sec.13, T.2 N., R.35 W., Hitchcock County, Hydrologic Unit 10250004, on right bank at downstream side of county bridge, 0.5 mi south of Stratton, 0.2 mi downstream from Muddy Creek, 10 mi upstream from Trenton Dam, and 19 mi downstream from South Fork Republican River.

DRAINAGE AREA.--8,450 mi², approximately, of which about 3,800 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July 1950 to current year.

REVISED RECORDS.--WSP 2119: Drainage area. WDR NE-73: 1968-71(M), 1972.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,775.49 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 1, 1967, at site 0.3 mi downstream at present datum.

REMARKS.--Records poor. Natural flow affected by irrigation development above station and by storage in Bonny Reservoir (station 06826000).

AVERAGE DISCHARGE.--34 years, 129 ft³/s, 93,460 acre-ft/yr; median of yearly mean discharges, 116 ft³/s, 84,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,800 ft³/s July 31, 1962, gage height, 9.34 ft, site then in use; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred May 31, 1935, discharge, about 200,000 ft³/s, based on slope-area measurement at Max.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 873 ft³/s May 6, gage height, 7.71 ft; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	21	21	120	190	180	193	515	127	21	.00	.00
2	.00	22	15	110	225	171	251	544	113	33	.00	.00
3	.00	22	4.4	110	205	181	287	638	94	32	.00	.00
4	.00	22	4.4	120	200	182	251	579	141	63	.00	.00
5	.00	22	4.2	140	195	163	263	554	149	56	.00	.00
6	.00	22	4.0	140	190	156	281	730	120	46	.00	.00
7	.00	23	12	130	220	172	328	686	107	33	.00	.00
8	.00	26	25	110	200	180	339	492	94	27	.00	.00
9	.00	32	40	120	190	182	286	409	94	17	.00	.00
10	.00	34	38	130	190	169	255	389	94	12	.00	.00
11	.00	43	36	140	195	152	254	349	158	8.0	.00	.00
12	.00	46	44	130	175	158	238	312	171	5.6	.00	.00
13	.00	49	62	90	190	148	203	288	153	1.6	.00	.00
14	.00	51	50	80	210	140	165	272	123	.50	.00	.00
15	.00	50	52	60	195	134	149	257	113	.50	.00	.00
16	.00	50	45	50	190	134	147	240	123	.32	.00	.00
17	.00	52	46	54	155	142	145	224	113	.00	.00	.00
18	.00	54	20	25	125	149	143	224	97	.00	.00	.00
19	.42	55	21	30	130	171	140	226	77	.00	.00	.00
20	1.5	56	15	40	138	190	240	229	75	.00	.00	.00
21	3.3	61	10	38	153	230	433	201	72	.00	.00	.00
22	6.2	62	11	60	229	251	465	182	56	.00	.00	.00
23	8.8	57	14	56	269	224	388	168	56	.00	.00	.00
24	9.4	54	14	80	257	195	464	164	58	.00	.00	.00
25	8.6	70	13	100	251	201	420	170	58	.00	.00	.00
26	11	76	30	150	269	203	381	168	63	.00	.00	.00
27	13	48	60	130	201	195	330	166	50	.00	.00	.00
28	13	35	50	140	180	205	305	164	48	.00	.00	.00
29	13	30	35	170	166	192	351	158	42	.00	.00	.00
30	15	21	40	160	---	180	433	154	25	.00	.00	.00
31	16	---	66	160	---	180	---	149	---	.00	.00	---
TOTAL	119.22	1266	902.0	3173	5683	5510	8528	10001	2864	356.52	.00	.00
MEAN	3.85	42.2	29.1	102	196	178	284	323	95.5	11.5	.00	.00
MAX	16	76	66	170	269	251	465	730	171	63	.00	.00
MIN	.00	21	4.0	25	125	134	140	149	25	.00	.00	.00
AC-FT	236	2510	1790	6290	11270	10930	16920	19840	5680	707	.00	.00

CAL YR 1983	TOTAL 33513.02	MEAN	91.8	MAX	449	MIN	.00	AC-FT 66470
WTR YR 1984	TOTAL 38402.74	MEAN	105	MAX	730	MIN	.00	AC-FT 76170

06829000 SWANSON LAKE NEAR TRENTON, NE

LOCATION.--Lat 40°10'10", long 101°03'35", in SE1/4NE1/4 sec.5, T.2 N., R.33 W., Hitchcock County, Hydrologic Unit 10250004, in gate-control house at right end of spillway on downstream side of Trenton Dam on Republican River, 2.5 mi west of Trenton.

DRAINAGE AREA.--8,620 mi², approximately, of which about 3,940 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--May 1953 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Nov. 13, 1953, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began May 4, 1953. Capacity, 116,100 acre-ft between elevations 2,710.0 ft, sill of outlet gates, and 2,752.0 ft, top of storage pool. Top of flood-control pool is at elevation 2,773.0 ft, capacity, 254,000 acre-ft. Top of superstorage flood-control pool at elevation 2,785.0 ft, capacity, 361,600 acre-ft. Dead storage, 4,100 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 148,900 acre-ft Aug. 2, 3, 1962, elevation, 2,757.42 ft; minimum since operation of reservoir began, 19,950 acre-ft Oct. 24, 1954, elevation, 2,722.61 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 131,800 acre-ft May 10, 11, elevation, 2,754.27 ft; minimum contents, 71,740 acre-ft Oct. 28 to Nov. 8, elevation, 2,741.04 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

2,740	67,730	2,753	135,600
2,745	87,930	2,760	163,900
2,750	110,500		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72720	71740	73380	75920	81620	93970	105400	125100	130000	128500	105500	85590
2	72680	71740	73340	76000	82120	94270	106100	126500	130000	128200	104800	84960
3	72640	71740	73340	76080	82540	94670	106800	127900	130000	127400	104200	84370
4	72600	71740	73340	76280	82950	94890	107300	128800	130000	127300	103600	83660
5	72440	71740	73340	76360	83280	95340	107800	130000	130100	127000	102900	82740
6	72440	71740	73340	76480	83700	95740	108300	131500	130000	126600	102200	82290
7	72360	71740	73380	76610	84120	95920	108900	131500	130000	126100	101500	82290
8	72320	71740	73460	76770	84620	96140	109600	131600	129900	125500	100400	81740
9	72320	71930	73540	76930	85090	96450	110100	131700	130100	124900	99680	81290
10	72320	71930	73700	77130	85550	96890	110700	131800	129900	124500	98910	81000
11	72320	71930	73820	77370	86140	96940	111400	131800	130600	123600	98100	80880
12	72290	72010	74020	77610	86520	97430	111800	131700	130700	122800	97340	80800
13	72210	72090	74170	77900	86950	97790	112000	131500	130800	121900	96360	80670
14	72170	72170	74330	78220	87330	98150	112300	131300	130800	121100	95600	80590
15	72090	72170	74450	78420	87930	98420	112600	131200	130900	120300	94890	80550
16	72050	72170	74570	78550	88360	98730	112900	131000	130900	119300	94140	80430
17	72010	72210	74730	78750	88490	98960	113200	130800	130900	118100	93480	80430
18	72010	72290	74810	78910	89350	99500	113500	130900	130900	117300	92690	80430
19	72050	72360	74890	79070	89390	100100	113800	130800	130900	116500	91950	80380
20	72010	72320	75040	79110	89740	100500	114800	130500	130800	115700	92600	80340
21	72050	72360	75160	79110	89990	101100	116300	130800	130700	115000	92730	80220
22	72010	72520	75200	79110	90470	101700	117800	130800	130600	114200	92080	80100
23	71970	72680	74930	79110	90990	102100	118800	130700	130500	113300	91380	80100
24	71890	72720	75360	79110	91560	102500	119600	130500	130400	112400	90860	80050
25	71890	72720	75400	79480	91860	102900	120500	130500	130400	111000	90300	79890
26	71820	72720	75480	79850	92510	103300	121300	130400	130200	110600	89690	79770
27	71780	73150	75560	80100	93000	103700	122000	130200	129900	109700	89090	79680
28	71740	73380	75680	80300	93390	104100	122800	130000	129600	108900	88360	79680
29	71740	73380	75680	80630	93790	104300	123500	129800	129300	108000	87590	79600
30	71740	73380	75760	80920	---	104700	124300	129800	128800	107100	86910	79560
31	71740	---	75840	81290	---	105000	---	129900	---	106300	86270	---
MAX	72720	73380	75840	81290	93790	105000	124300	131800	130900	128500	105500	85590
MIN	71740	71740	73340	75920	81620	93970	105400	125100	128800	106300	86270	79560
(†)	2741.04	2741.46	2742.08	2743.42	2746.35	2748.83	2752.82	2753.92	2753.70	2749.11	2744.61	2743.00
(††)	-980	+1640	+2460	+5450	+12500	+11210	+19300	+5600	-1100	-22500	-20030	-6710

CAL YR 1983 MAX 130300 MIN 71740 (††) -38060
WTR YR 1984 MAX 131800 MIN 71740 (†) +6840

(†) Elevation, in feet, at end of month.
(††) Change in contents, in acre-feet.

06829500 REPUBLICAN RIVER AT TRENTON, NE

LOCATION.--Lat 40°10'00", long 101°02'40", in SE1/4 sec.4, T.2 N., R.33 W., Hitchcock County, Hydrologic Unit 10250004, on left bank 300 ft upstream from Elm Creek, 0.9 mi downstream from centerline of spillway of Trenton Dam, and 1.5 mi southwest of Trenton.

DRAINAGE AREA.--8,620 mi², approximately, of which about 3,940 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,671.06 ft National Geodetic Vertical Datum of 1929. See WSP 2119 for history of changes prior to Oct. 1, 1959.

REMARKS.--Records fair. Natural flow affected by irrigation development above station, since July 6, 1950, by storage in Bonny Reservoir (station 06826000), since 1953 by storage in Swanson Lake (station 06829000), and since June 1957 by Meeker-Driftwood Canal which diverts directly from Swanson Lake for irrigation of about 16,400 acres.

AVERAGE DISCHARGE.--31 years (1954-84), 57.2 ft³/s, 41,440 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft³/s June 16, 1948, gage height, 5.64 ft, former site and datum; no flow at times in 1947-50, 1952-54.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood known since about 1826 occurred May 31, 1935, discharge, about 200,000 ft³/s. Discharge of 21,100 ft³/s was measured July 3, 1946, gage height, 6.0 ft, former site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 333 ft³/s May 14, gage height, 5.03 ft; minimum daily, 0.50 ft³/s Dec. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.6	1.5	.90	1.3	.83	.99	1.8	67	60	99	85
2	1.3	1.6	1.4	.88	1.4	.76	1.5	2.1	66	85	99	84
3	1.3	1.6	1.3	.91	1.3	.78	1.2	1.9	66	118	99	83
4	1.3	1.5	1.2	.91	1.3	.75	1.0	1.6	66	120	100	83
5	1.3	1.5	1.1	.93	1.2	.73	1.1	2.0	65	121	100	82
6	1.3	1.5	1.0	.96	1.2	.79	1.2	1.9	64	121	99	82
7	1.3	1.4	1.0	.88	1.1	.79	1.1	99	63	121	98	81
8	1.3	1.5	.96	.96	1.0	.80	.99	321	63	120	98	80
9	1.3	1.4	.96	.96	1.0	.92	1.0	326	62	119	99	80
10	1.4	1.5	.96	.96	1.1	.85	1.1	326	61	117	98	68
11	1.5	1.4	.92	.95	1.0	.99	1.0	327	63	117	99	28
12	1.4	1.4	.91	.91	.92	.97	.81	327	61	117	99	1.4
13	1.4	1.4	.91	.80	.92	.88	.78	329	61	118	98	1.1
14	1.5	1.4	.91	.80	.94	.90	.82	330	61	118	98	1.0
15	1.6	1.4	.90	.80	.94	.86	.86	331	61	117	97	.97
16	1.7	1.4	.87	.80	.92	.84	.87	332	61	116	97	.98
17	1.6	1.4	.87	.90	.87	.83	.92	330	61	111	96	.97
18	1.7	1.4	.80	.60	.86	.84	.91	319	60	100	96	.96
19	1.8	1.4	.80	.60	.85	.99	.91	310	61	107	95	.97
20	1.8	1.4	.80	.70	.78	1.0	1.6	308	61	103	95	1.0
21	1.8	1.4	.60	.70	.80	.93	1.6	257	61	102	102	.97
22	1.8	1.4	.50	.80	.85	.90	1.2	186	61	102	95	.97
23	1.8	1.4	.50	.80	.82	.92	1.2	185	61	101	92	.99
24	1.8	1.4	.60	.90	.80	1.0	1.3	186	61	100	92	.96
25	1.7	1.4	.60	.90	.90	.96	1.5	185	61	99	91	.92
26	1.6	1.4	.70	1.0	.89	.93	1.3	185	61	99	91	.89
27	1.6	1.4	1.1	1.0	.79	.88	1.1	184	60	99	89	.92
28	1.6	3.5	1.0	1.0	.83	.88	1.0	183	60	100	88	.90
29	1.6	2.4	.80	1.1	.84	.94	2.1	183	60	101	88	.95
30	1.6	1.8	.80	1.2	---	.94	1.5	120	60	100	86	.90
31	1.6	---	.80	1.2	---	.99	---	69	---	100	85	---
TOTAL	47.6	46.6	28.07	27.71	28.42	27.37	34.46	6249.3	1860	3329	2958	854.72
MEAN	1.54	1.55	.91	.89	.98	.88	1.15	202	62.0	107	95.4	28.5
MAX	1.8	3.5	1.5	1.2	1.4	1.0	2.1	332	67	121	102	85
MIN	1.3	1.4	.50	.60	.78	.73	.78	1.6	60	60	85	.89
AC-FT	94	92	56	55	56	54	68	12400	3690	6600	5870	1700

CAL YR 1983 TOTAL 32326.07 MEAN 88.6 MAX 321 MIN .50 AC-FT 64120
WTR YR 1984 TOTAL 15491.25 MEAN 42.3 MAX 332 MIN .50 AC-FT 30730

06829500 REPUBLICAN RIVER AT TRENTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1967 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)
OCT 14...	1000	1.0	900	8.1	12.0	7.3
NOV 14...	1300	1.0	--	--	8.5	9.6
DEC 13...	1500	1.0	825	7.6	4.5	8.6
MAR 01...	1225	1.0	830	8.0	11.0	11.9
JUL 06...	1200	121	690	8.2	23.0	10.1
AUG 14...	1035	98	630	8.1	25.0	6.8
SEP 11...	1150	9.0	685	--	19.0	6.1

DATE	TIME	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 14...	1300	<1	270	16	71	23	61	2	14	256	140
MAR 01...	1225	<1	240	0	59	23	61	2	13	249	140

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV 14...	27	1.2	41	550	.72	1.4	.94	<.010	170	10	24
MAR 01...	19	1.3	35	500	.68	1.4	.87	.010	170	50	43

06831500 FRENCHMAN CREEK NEAR IMPERIAL, NE

LOCATION.--Lat 40°25'45", long 101°37'25", in SW1/4NW1/4 sec.3, T.5 N., R.38 W., Chase County, Hydrologic Unit 10250005, on right bank 0.2 mi downstream from bridge on county highway, 5.8 mi upstream from Enders Dam, and 6.1 miles south of Imperial.

DRAINAGE AREA.--880 mi², approximately, of which about 720 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year. Published as Frenchman River near Imperial October 1965 to September 1972.

REVISED RECORDS.--WSP 976: 1942(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,130 ft, from topographic map. Prior to Mar. 7, 1941, nonrecording gage at bridge 0.2 mi upstream at different datum. Mar. 7, 1941, to Sept. 30, 1958, water-stage recorder at site 0.2 mi downstream at datum 4.35 ft lower.

REMARKS.--Records good. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--44 years, 61.9 ft³/s, 44,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,340 ft³/s Mar. 22, 1960, gage height, 8.43 ft; minimum daily, 4.8 ft³/s Mar. 12, 1977, backwater from ice.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 7, 1940, reached a stage of 12.4 ft, from floodmarks, site and datum in use Mar. 7, 1941, to Sept. 30, 1958 (discharge not determined but believed greater than that of Mar. 22, 1960).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 63 ft³/s Apr. 21, gage height, 1.52 ft, no peak above base of 150 ft³/s; maximum gage height, 2.30 ft Jan. 18, backwater from ice; minimum daily discharge, 9.5 ft³/s Nov. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	29	37	40	39	34	33	41	32	28	26	20
2	25	29	36	41	36	34	36	41	31	29	26	21
3	26	29	40	41	39	34	40	42	31	29	25	21
4	26	29	45	41	40	34	37	40	32	41	25	20
5	25	29	41	42	40	33	38	41	32	42	24	21
6	25	29	43	43	40	33	38	43	31	34	23	21
7	25	29	42	44	40	33	38	42	30	31	24	21
8	25	29	42	44	41	32	36	40	30	30	23	20
9	26	30	43	42	40	32	35	38	32	30	23	21
10	26	30	43	41	39	32	35	38	31	28	23	21
11	26	30	44	41	39	32	35	38	37	27	22	21
12	26	30	44	41	38	33	34	38	42	27	22	21
13	26	30	42	39	38	33	32	36	35	27	21	22
14	26	30	41	37	40	32	33	35	33	27	21	23
15	27	30	40	36	39	33	33	36	33	27	21	22
16	26	30	38	38	36	32	34	35	38	27	21	22
17	26	30	33	38	37	33	34	34	37	27	21	22
18	27	30	31	22	36	33	34	36	34	27	22	22
19	29	33	32	25	37	34	34	34	33	27	21	21
20	28	32	30	24	39	34	44	35	33	26	21	21
21	29	32	28	29	40	33	59	33	32	27	21	20
22	29	33	25	30	40	33	58	33	33	26	21	21
23	29	32	29	33	39	33	49	33	33	23	22	22
24	28	32	28	38	36	32	44	34	30	22	21	22
25	28	32	29	43	35	32	40	33	30	24	19	22
26	29	31	30	46	33	33	39	33	30	25	20	22
27	29	9.6	33	44	33	32	38	34	29	25	20	22
28	28	9.5	28	45	32	32	36	32	29	24	19	23
29	28	16	30	47	33	31	42	32	29	24	20	23
30	29	20	33	48	---	32	44	32	28	24	19	23
31	29	---	37	45	---	33	---	32	---	24	20	---
TOTAL	836	844.1	1117	1208	1094	1016	1162	1124	970	859	677	644
MEAN	27.0	28.1	36.0	39.0	37.7	32.8	38.7	36.3	32.3	27.7	21.8	21.5
MAX	29	33	45	48	41	34	59	43	42	42	26	23
MIN	25	9.5	25	22	32	31	32	32	28	22	19	20
AC-FT	1660	1670	2220	2400	2170	2020	2300	2230	1920	1700	1340	1280

CAL YR 1983	TOTAL 12422.1	MEAN	34.0	MAX	55	MIN	9.5	AC-FT	24640
WTR YR 1984	TOTAL 11551.1	MEAN	31.6	MAX	59	MIN	9.5	AC-FT	22910

KANSAS RIVER BASIN

06832000 ENDERS RESERVOIR NEAR ENDERS, NE

LOCATION.--Lat 40°25'05", long 101°30'55", in NE1/4 sec.9, T.5 N., R.37 W., Chase County, Hydrologic Unit 10250005, near right bank in control house at outlet tube of Enders Dam on Frenchman Creek, 2.2 mi southeast of Enders.

DRAINAGE AREA.--950 mi², approximately, of which about 790 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 3, 1960, mercury-column pressure gage at same datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began Oct. 23, 1950. Capacity, 36,010 acre-ft between elevations 3,080.0 ft, sill of outlet gates, and 3,112.3 ft, top of storage pool. Top of flood-control pool at elevation 3,127.0 ft, capacity, 74,520 acre-ft. Top of superstorage flood-control pool at elevation 3,129.5 ft, capacity, 80,730 acre-ft. Dead storage, 8,470 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,330 acre-ft Mar. 25, 1960, elevation, 3,118.20 ft; minimum since operation of reservoir began, 8,870 acre-ft Aug. 28, 1978, elevation, 3,080.67 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 35,520 acre-ft June 26, elevation, 3,105.65 ft; minimum, 14,390 acre-ft Sept. 9, elevation, 3,088.33 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

3,085	11,770	3,100	26,540
3,090	15,830	3,110	40,660

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16430	18620	20830	23440	26240	28480	30110	32610	34180	34960	25630	16180
2	16500	18720	20900	23600	26300	28530	30250	32690	34210	34770	25310	15850
3	16560	18800	21000	23690	26340	28570	30350	32800	34250	34590	25050	15550
4	16610	18870	21110	23800	26440	28630	30470	32830	34320	34470	24760	15260
5	16670	18950	21220	23860	26520	28670	30560	32940	34360	34460	24420	14980
6	16760	19020	21330	23960	26630	28760	30690	33040	34360	34380	23990	14760
7	16810	19100	21440	24050	26700	28770	30760	33110	34380	34360	23660	14560
8	16860	19180	21530	24170	26800	28820	30830	33170	34380	34330	23340	14420
9	16950	19230	21630	24240	26870	28850	30900	33250	34390	34230	23060	14390
10	17050	19300	21750	24340	26940	28910	30960	33320	34380	33980	22810	14470
11	17100	19380	21850	24380	26990	28940	31030	33420	34650	33750	22550	14540
12	17160	19470	21940	24480	27160	29030	31030	33500	34690	33480	22270	14640
13	17250	19560	22020	24550	27170	29080	31040	33570	34750	33150	21970	14680
14	17340	19610	22060	24650	27180	29130	31070	33580	34840	32780	21680	14760
15	17400	19670	22150	24740	27310	29160	31120	33620	35020	32360	21360	14830
16	17470	19760	22230	24810	27410	29200	31170	33670	35170	31890	21060	14900
17	17550	19850	22290	24890	27540	29240	31230	33650	35200	31510	20780	14980
18	17630	19910	22380	24930	27650	29300	31260	33670	35240	31110	20460	15050
19	17680	19990	22460	25000	27760	29440	31290	33710	35260	30760	20120	15110
20	17760	20050	22510	25090	27840	29490	31590	33750	35310	30400	19760	15160
21	17840	20120	22530	25170	27940	29540	31780	33790	35360	30040	19420	15220
22	17930	20180	22590	25250	28020	29580	31920	33840	35450	29650	19090	15260
23	18020	20260	22650	25360	28110	29630	32040	33880	35450	29250	18750	15320
24	18060	20320	22710	25440	28180	29700	32110	33920	34570	28810	18500	15370
25	18140	20400	22780	25550	28220	29770	32180	33960	35490	28390	18220	15430
26	18240	20500	22860	25640	28260	29830	32190	33990	35520	27950	17920	15470
27	18290	20620	22950	25760	28300	29830	32210	34030	35450	27540	17600	15540
28	18340	20630	23040	25860	28320	29870	32250	34090	35430	27140	17320	15610
29	18410	20670	23110	25940	28400	29940	32410	34120	35310	26740	17010	15680
30	18470	20720	23200	26030	---	29990	32500	34160	35240	26390	16710	15740
31	18550	---	23310	26130	---	30060	---	34210	---	25970	16470	---
MAX	18550	20720	23310	26130	28400	30060	32500	34210	35520	34960	25630	16180
MIN	16430	18620	20830	23440	26240	28480	30110	32610	34180	25970	16470	14390
(†)	3092.87	3094.97	3097.30	3099.67	3101.47	3102.74	3104.54	3105.75	3106.46	3099.54	3090.70	3089.90
(††)	+2200	+2170	+2590	+2820	+2270	+1660	+2440	+1710	+1030	-9270	-9500	-730

CAL YR 1983	MAX	37340	MIN	15100	(††)	-2400
WTR YR 1984	MAX	35520	MIN	14390	(††)	-610

(†) Elevation, in feet, at end of month.
(††) Change in contents, in acre-feet.

06832500 FRENCHMAN CREEK NEAR ENDERS, NE

LOCATION.--Lat 40°25'05", long 101°30'35", in NW1/4NW1/4 sec.10, T.5 N., R.37 W., Chase County, Hydrologic Unit 10250005, on left bank 0.2 mi downstream from Enders Dam and 2.5 mi southeast of Enders.

DRAINAGE AREA.--950 mi², approximately, of which about 790 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--February 1946 to current year. Published as Frenchman River near Enders October 1965 to September 1972.

REVISED RECORDS.--WSP 2119: 1956, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,026.22 ft National Geodetic Vertical Datum of 1929. Prior to June 14, 1948, at site 800 ft upstream at datum 6.03 ft higher. June 14, 1948, to Sept. 14, 1972, at present site at datum 5.00 ft higher.

REMARKS.--Records good except those below 5.0 ft³/s, which are poor. Flow regulated by Enders Reservoir (station 06832000).

AVERAGE DISCHARGE.--38 years, 60.3 ft³/s, 43,690 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 763 ft³/s Aug. 20, 1953, gage height, 11.31 ft, present datum; maximum gage height, 11.65 ft, present datum, July 18, 1958, backwater from downstream tributary; no flow for many days in 1972-83.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 256 ft³/s July 16, gage height, 8.03 ft; no flow Sept. 16, 22-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	.27	.37	.42	1.5	.91	.85	1.2	1.5	98	217	160
2	1.3	.28	.37	.42	1.3	.83	1.0	1.3	1.7	122	197	178
3	.42	.28	.37	.37	1.5	1.2	1.0	1.1	1.7	136	171	183
4	.46	.28	.37	.37	1.6	1.1	.91	1.1	1.7	83	182	164
5	.43	.32	.37	.33	1.6	1.3	1.0	1.2	1.5	52	195	163
6	.35	.32	.38	.37	1.5	1.2	.91	1.5	1.5	26	208	137
7	.32	.28	.41	.43	1.4	1.0	1.3	1.3	1.5	28	215	111
8	.28	.28	.47	.48	1.5	.88	1.0	1.1	1.7	48	188	93
9	.32	.32	.43	.46	1.5	.90	1.2	1.2	1.9	76	159	48
10	.32	.32	.37	.57	1.6	.91	1.1	1.2	1.8	113	140	.54
11	.32	.32	.42	.61	1.7	.98	.95	1.3	2.2	137	147	.01
12	.28	.32	.44	.61	1.7	1.1	.99	1.2	1.4	161	154	.01
13	.28	.37	.40	.68	1.7	.86	1.3	1.3	1.3	173	162	.01
14	.32	.42	.42	.91	1.6	.68	1.3	1.4	1.4	203	174	.01
15	.24	.42	.42	.91	1.6	.61	1.5	1.3	1.8	240	183	.01
16	.24	.42	.42	.83	1.7	.90	1.7	1.4	1.8	253	180	.00
17	.32	.42	.37	.83	1.8	1.0	1.6	1.5	1.7	246	155	.06
18	.32	.42	.42	.75	2.0	.83	1.6	1.7	1.6	226	173	.22
19	.28	.42	.37	.60	1.9	.93	1.6	1.6	1.5	210	197	.23
20	.28	.42	.35	.60	1.9	.83	2.8	1.9	1.3	185	200	.20
21	.28	.42	.42	.60	1.8	.80	2.3	1.7	1.3	194	197	.13
22	.28	.42	.37	.70	1.7	.76	1.6	1.5	1.6	206	195	.00
23	.28	.42	.37	.80	1.4	.69	1.4	1.6	1.8	225	193	.00
24	.32	.42	.42	1.0	1.5	1.1	1.2	1.6	2.0	236	170	.00
25	.42	.42	.37	1.6	1.6	.83	1.3	1.8	1.4	238	178	.00
26	.42	.42	.37	1.4	1.7	.87	1.2	1.8	1.5	228	182	.00
27	.32	.42	.37	1.4	1.4	.71	1.4	1.5	29	228	172	.00
28	.28	.37	.42	1.5	1.3	.73	1.2	1.8	36	227	171	.00
29	.28	.37	.42	1.6	1.5	.65	1.6	1.6	45	216	169	.00
30	.29	.37	.37	1.7	---	.65	1.3	1.5	72	217	152	.00
31	.28	---	.42	1.8	---	.81	---	1.3	---	219	150	---
TOTAL	12.33	10.95	12.26	25.65	46.5	27.55	40.11	44.5	224.1	5250	5526	1238.43
MEAN	.40	.36	.40	.83	1.60	.89	1.34	1.44	7.47	169	178	41.3
MAX	1.8	.42	.47	1.8	2.0	1.3	2.8	1.9	72	253	217	183
MIN	.24	.27	.35	.33	1.3	.61	.85	1.1	1.3	26	140	.00
AC-FT	24	22	24	51	92	55	80	88	445	10410	10960	2460

CAL YR 1983	TOTAL	13248.66	MEAN	36.3	MAX	303	MIN	.00	AC-FT 26280
WTR YR 1984	TOTAL	12458.38	MEAN	34.0	MAX	253	MIN	.00	AC-FT 24710

06834000 FRENCHMAN CREEK AT PALISADE, NE

LOCATION.--Lat 40°21'12", long 101°07'35", in SW1/4SE1/4 sec.36, T.5 N., R.34 W., Hayes County, Hydrologic Unit 10250005, on right bank at upstream side of bridge on U.S. Highway 6, 0.7 mi west of Palisade, and 1.5 mi upstream from Stinking Water Creek.

DRAINAGE AREA.--1,110 mi², approximately, of which about 950 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to October 1896, June 1950 to current year. Published as Frenchman River at Palisade, October 1894 to October 1896 and October 1965 to September 1972.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,743.49 ft National Geodetic Vertical Datum of 1929. October 1894 to October 1896, nonrecording gage at railroad bridge 0.4 mi downstream at different datum; June 1950 to Feb. 7, 1977, recording gage at site 2,000 ft upstream at datum 4.0 ft higher.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station and, since Oct. 23, 1950, by storage in Enders Reservoir (station 06832000).

AVERAGE DISCHARGE.--36 years, 82.7 ft³/s, 59,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft³/s June 17, 1956, gage height, 8.79 ft, site and datum then in use; minimum daily, 11 ft³/s Sept. 11, 12, 14, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 689 ft³/s June 16, gage height, 7.55 ft; minimum daily, 13 ft³/s Dec. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	23	15	28	37	31	29	46	33	59	208	173
2	28	24	18	27	38	31	33	47	33	85	210	172
3	27	24	26	25	39	31	36	53	31	102	197	173
4	27	24	29	32	40	31	36	49	33	133	177	175
5	26	24	28	40	39	30	35	49	32	122	177	175
6	26	24	27	28	41	31	33	65	32	87	184	175
7	25	24	29	32	37	31	37	64	31	80	193	174
8	25	24	32	35	33	30	38	53	29	57	201	162
9	25	26	39	39	32	30	35	50	31	65	184	148
10	25	27	36	42	32	30	35	49	30	70	164	122
11	26	26	38	44	31	30	35	50	32	98	146	68
12	25	26	40	40	31	30	34	48	41	127	146	60
13	25	27	39	30	31	31	33	46	45	137	150	52
14	25	26	39	23	30	28	33	43	32	151	152	46
15	24	27	32	21	30	26	32	43	30	167	162	40
16	24	27	26	19	29	26	31	42	402	201	170	33
17	24	27	20	18	29	26	31	42	150	217	169	34
18	23	27	17	17	28	27	31	42	69	220	151	30
19	23	27	16	16	20	31	31	42	51	210	157	29
20	23	27	14	17	37	29	38	41	44	198	178	29
21	23	27	13	17	32	29	56	40	39	180	185	27
22	23	27	14	20	31	29	59	40	38	182	182	26
23	23	27	14	23	31	29	50	39	37	189	181	27
24	23	26	15	26	31	29	47	38	33	201	182	24
25	23	27	17	32	31	29	44	38	32	213	173	24
26	22	28	20	30	31	30	43	38	31	218	173	24
27	22	20	30	30	31	30	42	37	29	211	175	24
28	22	17	27	32	29	30	39	35	29	211	173	23
29	23	18	23	34	30	29	45	34	44	210	173	23
30	23	17	24	35	---	29	47	33	47	205	173	24
31	23	---	25	36	---	29	---	33	---	205	173	---
TOTAL	754	745	782	888	941	912	1148	1369	1570	4811	5419	2316
MEAN	24.3	24.8	25.2	28.6	32.4	29.4	38.3	44.2	52.3	155	175	77.2
MAX	28	28	40	44	41	31	59	65	402	220	210	175
MIN	22	17	13	16	20	26	29	33	29	57	146	23
AC-FT	1500	1480	1550	1760	1870	1810	2280	2720	3110	9540	10750	4590

CAL YR 1983	TOTAL	21500	MEAN	58.9	MAX	215	MIN	13	AC-FT	42650
WTR YR 1984	TOTAL	21655	MEAN	59.2	MAX	402	MIN	13	AC-FT	42950

06835000 STINKING WATER CREEK NEAR PALISADE, NE

LOCATION.--Lat 40°22'10", long 101°06'50", in SW1/4NW1/4 sec.30, T.5 N., R.33 W., Hayes County, Hydrologic Unit 10250006, on right bank 25 ft downstream from county bridge, 1.2 mi upstream from mouth, and 1.8 mi northwest of Palisade.

DRAINAGE AREA.--1,500 mi², approximately, of which about 380 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WSP 1730: 1952(M). WSP 1919: 1951(P), 1955. WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,740.99 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--35 years, 40.1 ft³/s, 29,050 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,030 ft³/s June 17, 1956, gage height, 11.30 ft, from rating curve extended above 1,200 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 6.0 ft³/s Aug. 4, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
June 13	0800	244	6.56	July 4	unknown	164	a5.62
June 16	0900	*2340	10.85				

a From floodmark

Minimum daily discharge, 13 ft³/s Aug. 19, 28, Aug. 31 to Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	21	23	29	40	35	35	62	39	37	19	13
2	17	21	27	25	44	35	38	60	40	36	19	13
3	17	21	29	25	45	36	41	62	39	36	20	13
4	17	22	26	23	43	36	43	59	39	70	19	13
5	17	22	28	23	42	36	44	56	39	106	19	13
6	17	22	25	24	41	35	49	57	39	49	18	13
7	17	22	28	26	41	34	53	58	37	40	18	13
8	17	22	31	26	42	34	55	58	35	37	17	13
9	17	23	29	27	42	33	50	53	36	34	17	13
10	18	23	30	28	41	34	45	50	36	31	16	14
11	18	23	34	28	42	33	43	48	38	30	16	14
12	18	23	35	27	43	35	43	48	109	29	16	14
13	18	23	33	23	42	35	42	49	213	28	15	14
14	18	23	32	19	40	35	41	49	63	26	15	14
15	18	23	29	18	44	35	40	49	38	25	15	14
16	18	23	30	20	46	34	39	48	925	24	15	15
17	18	23	27	19	44	35	38	46	377	25	14	15
18	18	23	22	16	43	35	39	46	95	24	14	16
19	19	23	24	20	39	36	39	45	61	24	13	16
20	19	23	23	19	32	37	42	44	57	23	14	16
21	20	23	17	24	35	40	66	49	60	23	15	16
22	20	23	18	25	36	39	106	47	52	23	14	16
23	20	22	24	27	38	37	106	46	49	22	14	16
24	20	24	23	29	45	36	82	44	46	21	14	16
25	20	23	25	33	46	35	65	42	45	20	14	16
26	20	23	33	29	45	35	51	41	43	20	14	16
27	20	22	32	29	43	35	46	42	41	20	14	17
28	20	20	30	32	40	35	45	43	40	19	13	17
29	20	21	29	35	35	34	46	42	39	19	14	17
30	20	19	30	36	---	34	52	42	38	19	14	18
31	20	---	32	39	---	34	---	39	---	19	13	---
TOTAL	573	669	858	803	1199	1092	1524	1524	2808	959	482	444
MEAN	18.5	22.3	27.7	25.9	41.3	35.2	50.8	49.2	93.6	30.9	15.5	14.8
MAX	20	24	35	39	46	40	106	62	925	106	20	18
MIN	17	19	17	16	32	33	35	39	35	19	13	13
AC-FT	1140	1330	1700	1590	2380	2170	3020	3020	5570	1900	956	881

CAL YR 1983	TOTAL	10600	MEAN	29.0	MAX	96	MIN	10	AC-FT	21030
WTR YR 1984	TOTAL	12935	MEAN	35.3	MAX	925	MIN	13	AC-FT	25660

06835500 FRENCHMAN CREEK AT CULBERTSON, NE

LOCATION.--Lat 40°14'05", long 100°52'40", in SW1/4SE1/4 sec.12, T.3 N., R.32 W., Hitchcock County, Hydrologic Unit 10250005, on right bank 19 ft upstream from bridge on U.S. Highways 6 and 34, 2 mi west of Culbertson, and 4.5 mi upstream from mouth.

DRAINAGE AREA.--2,770 mi^2, approximately, of which about 1,470 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1913 to September 1915 (gage heights and discharge measurements only), October 1930 to current year. Published as Frenchman River at Culbertson October 1965 to September 1972. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1931, 1933, 1934(M), 1938(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,583.44 ft National Geodetic Vertical Datum of 1929. See WSP 1919 for history of changes prior to Nov. 2, 1950.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station and, since Oct. 23, 1950, by storage in Enders Reservoir (station 06832000). Prinicipal diversion is by Culbertson Canal, 20,800 acres.

AVERAGE DISCHARGE.--54 years, 102 ft^3/s, 73,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft^3/s, estimated, May 31, 1935, gage height, 14.8 ft, from floodmarks, present site and datum; no flow Aug. 7, 8, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 864 ft^3/s June 17, gage height, 7.96 ft; minimum daily discharge, 0.98 ft^3/s Sept. 8.

REVISIONS.--The maximum discharges for the water years 1979 and 1982 have been revised to 330 ft^3/s, July 29, 1979, gage height, 4.57 ft and 768 ft^3/s, Aug. 14, 1982, gage height, 7.49 ft, superseding figures published in reports for 1979 and 1982.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	48	29	64	97	87	79	88	38	35	7.7	1.5
2	44	49	42	62	100	86	83	94	35	38	7.5	1.3
3	45	50	47	60	101	87	89	118	33	40	6.3	1.1
4	46	51	52	66	102	85	91	103	32	234	5.6	1.2
5	39	55	52	80	104	84	93	100	31	138	5.3	1.4
6	45	52	47	63	100	84	93	162	31	98	5.3	1.0
7	45	49	54	66	101	82	99	123	30	68	5.8	.99
8	51	51	62	70	103	80	103	111	28	57	5.4	.98
9	47	55	70	74	104	80	103	105	30	41	6.4	5.1
10	45	53	62	76	104	78	96	94	28	36	5.7	4.6
11	49	58	70	80	100	80	92	89	32	32	4.7	46
12	49	57	74	79	96	80	90	88	31	32	4.5	53
13	49	60	73	71	96	82	86	91	112	28	4.2	30
14	48	56	72	59	94	83	84	81	147	28	4.2	29
15	53	58	64	48	98	82	82	79	56	27	3.9	28
16	50	58	55	46	102	81	81	79	97	31	3.1	29
17	46	60	44	44	101	80	80	75	716	32	2.9	28
18	47	60	33	40	96	82	71	77	286	26	2.9	26
19	46	66	34	38	73	81	56	75	106	21	2.4	26
20	47	63	30	41	97	88	60	73	77	18	3.0	26
21	49	59	26	40	96	89	114	73	71	18	7.1	26
22	53	60	25	50	98	90	145	74	65	16	9.6	25
23	53	56	34	48	94	87	158	61	58	15	4.7	26
24	45	54	35	66	97	85	115	57	53	15	3.6	26
25	45	61	34	80	103	85	100	54	48	14	3.0	26
26	45	63	38	70	104	85	84	51	46	14	2.3	23
27	45	50	60	71	99	84	72	49	42	13	2.0	26
28	46	32	56	80	92	82	68	47	39	8.9	2.6	25
29	51	35	47	86	89	78	81	46	39	8.2	2.6	33
30	49	30	48	90	---	78	107	45	40	7.5	1.7	33
31	45	---	56	91	---	79	---	42	---	7.4	1.4	---
TOTAL	1460	1609	1525	1999	2841	2574	2755	2504	2477	1197.0	137.4	609.17
MEAN	47.1	53.6	49.2	64.5	98.0	83.0	91.8	80.8	82.6	38.6	4.43	20.3
MAX	53	66	74	91	104	90	158	162	716	234	9.6	53
MIN	39	30	25	38	73	78	56	42	28	7.4	1.4	.98
AC-FT	2900	3190	3020	3970	5640	5110	5460	4970	4910	2370	273	1210

CAL YR 1983 TOTAL 20760.0 MEAN 56.9 MAX 163 MIN 3.4 AC-FT 41180
WTR YR 1984 TOTAL 21687.57 MEAN 59.3 MAX 716 MIN .98 AC-FT 43020

06835500 FRENCHMAN CREEK AT CULBERTSON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)
OCT						
14...	1430	38	--	8.4	12.0	6.2
NOV						
14...	1400	49	--	--	6.0	9.3
DEC						
13...	0945	71	515	8.0	.5	9.9
MAR						
01...	1325	58	--	7.9	6.0	8.1
JUL						
06...	1400	87	455	7.6	24.0	7.0
AUG						
14...	1410	4.0	700	8.4	26.5	10.2
SEP						
11...	1040	6.0	720	--	15.5	8.6

DATE	TIME	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV											
14...	1400	10	230	107	64	18	24	.7	15	127	55
MAR											
01...	1325	40	220	0	60	18	29	.9	12	237	45

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV											
14...	84	.90	54	390	.53	52	3.1	.030	110	30	3
MAR											
01...	8.2	1.0	50	370	.50	87	2.7	.050	90	29	8

06836000 BLACKWOOD CREEK NEAR CULBERTSON, NE

LOCATION.--Lat 40°14'10", long 100°48'39", in SE1/4SW1/4 sec.10, T.3 N., R.31 W., Hitchcock County, Hydrologic Unit 10250004, on right bank 500 ft upstream from bridge on U.S. Highways 6 and 34, 0.2 mi north of Burlington Northern Inc. bridge, 1 mi east of Culbertson, and 1.8 mi upstream from mouth.

DRAINAGE AREA.--320 mi^2, approximately, of which about 270 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--May 1946 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,555.25 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1967, at site 0.2 mile downstream at present datum and Oct. 1, 1967, to Aug. 28, 1968, at site 0.8 mi downstream at datum 8.96 ft lower.

REMARKS.--Records good except for periods of backwater from beaver dams and/or ice Oct. 1 to June 27 and Sept. 21-30, which are poor. Natural flow affected by irrigation development above station, return flow from irrigated areas, and waste from Culbertson Canal.

AVERAGE DISCHARGE.--38 years, 6.06 ft^3/s, 4,390 acre-ft/yr; median of yearly mean discharges, 5.4 ft^3/s, 3,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,650 ft^3/s June 17, 1955, gage height, 14.64 ft, site then in use; no flow Jan. 4-6, 1950.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 31, 1935, reached a stage of 24.0 ft, at site 0.2 mi downstream, at present datum, from floodmarks, discharge, about 5,300 ft^3/s, from information by Nebraska Department of Roads.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 277 ft^3/s June 17, gage height, 7.13 ft; no other peak above base of 150 ft^3/s; minimum daily, 0.30 ft^3/s Dec. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	.66	.63	.91	1.5	1.1	.63	1.8	5.3	2.6	6.0	6.1
2	.75	.63	.63	.97	1.3	1.1	.75	.72	.95	1.6	8.4	4.7
3	.86	.63	.66	1.0	1.3	1.0	.75	11	1.2	1.8	8.6	3.1
4	.86	.63	.63	1.0	1.3	.90	.66	1.6	2.3	9.5	10	4.5
5	.72	.63	.63	1.0	1.3	.80	.72	.63	2.3	6.2	7.6	3.2
6	.75	.66	.63	1.1	1.3	.80	.72	5.0	5.7	11	6.7	1.5
7	.75	.69	.66	1.1	1.3	.75	.72	6.4	5.3	6.4	4.3	5.2
8	.95	.69	.69	1.2	1.4	.95	.72	3.2	3.2	9.8	2.7	18
9	.86	.72	.66	1.2	1.4	.95	.69	1.5	3.2	6.9	4.2	15
10	.75	.72	.66	1.2	1.3	.75	.66	1.3	1.7	4.8	6.4	13
11	.75	.72	.72	1.3	1.3	.86	.69	1.7	4.6	3.6	13	21
12	.75	.72	.75	1.3	1.3	.86	.69	6.2	11	3.0	7.9	39
13	.75	.72	.75	1.2	1.2	.75	.69	2.7	2.3	3.6	6.0	20
14	.75	.72	.88	1.0	1.2	.72	.69	4.0	1.0	5.0	4.1	3.5
15	.86	.72	.75	.90	1.2	.72	.69	1.8	.69	5.9	2.9	.95
16	.75	.69	.75	.80	1.2	.72	.69	3.4	2.3	5.7	7.1	.72
17	.72	.69	.60	.70	1.2	.72	.69	5.5	202	5.0	6.2	.69
18	.72	.69	.50	.60	1.1	.75	.69	12	37	6.1	4.0	.72
19	.72	.72	.50	.50	.80	.72	.69	12	6.7	2.5	4.0	.72
20	.75	.75	.40	.60	.90	1.1	.86	13	5.0	1.3	5.4	.72
21	.75	.75	.30	.60	.95	1.0	1.8	13	13	2.9	8.2	.72
22	.72	.75	.30	1.1	1.2	.94	1.1	13	15	6.1	4.6	.69
23	.69	.75	.40	1.0	1.2	.76	.89	5.9	15	5.0	4.5	.72
24	.69	.72	.40	1.3	1.2	.72	.72	2.0	16	4.4	4.6	.72
25	.69	.72	.40	1.5	1.4	.72	.66	1.2	8.1	5.5	5.9	.72
26	.69	.69	.50	1.7	1.5	.72	.63	2.4	6.9	3.8	9.9	.69
27	.72	.53	.70	1.6	1.4	.69	2.0	2.0	2.4	5.2	10	.75
28	.69	.34	.70	1.7	1.4	.59	1.4	3.4	2.3	8.4	6.9	.75
29	.72	.56	.60	1.8	1.4	.59	3.2	3.6	1.4	5.6	2.9	.75
30	.75	.66	.70	1.6	---	.59	11	4.4	1.0	6.4	3.5	.86
31	.72	---	.80	1.4	---	.56	---	5.3	---	6.8	3.7	---
TOTAL	23.35	20.27	18.88	34.88	36.45	24.90	37.49	151.65	384.84	162.4	190.2	169.69
MEAN	.75	.68	.61	1.13	1.26	.80	1.25	4.89	12.8	5.24	6.14	5.66
MAX	.95	.75	.88	1.8	1.5	1.1	11	13	202	11	13	39
MIN	.69	.34	.30	.50	.80	.56	.63	.63	.69	1.3	2.7	.69
AC-FT	46	40	37	69	72	49	74	301	763	322	377	337

CAL YR 1983 TOTAL 735.20 MEAN 2.01 MAX 39 MIN .30 AC-FT 1460
WTR YR 1984 TOTAL 1255.00 MEAN 3.43 MAX 202 MIN .30 AC-FT 2490

06836500 DRIFTWOOD CREEK NEAR MCCOOK, NE

LOCATION.--Lat 40°09'41", long 100°39'35", in SE1/4SW1/4 sec.1, T.2 N., R.30 W., Red Willow County, Hydrologic Unit 10250004, on right bank downstream from county road bridge, 3.0 mi downstream from siphon and wasteway on Meeker-Driftwood Canal, 3.5 mi southwest of McCook, and 2.6 miles upstream from mouth.

DRAINAGE AREA.--360 mi², approximately, of which about 350 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--March 1946 to current year.

REVISED RECORDS.--WSP 1210: 1950.

GAGE.--Water-stage recorder. Datum of gage is 2,485.23 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 12, 1962, at site 1.7 mi upstream in old channel at datum 8.55 ft higher, Oct. 12, 1962, to Apr. 11, 1963, at site 1.4 mi upstream at datum 4.80 ft higher, and Apr. 12, 1963 to Apr. 22, 1982 at site 1.9 mi upstream at datum 8.55 ft higher.

REMARKS.--Records fair. Natural flow affected by waste from Meeker-Driftwood Canal and by irrigation development above station.

AVERAGE DISCHARGE.--38 years, 10.3 ft³/s, 7,460 acre-ft/yr; median of yearly mean discharges, 8.3 ft³/s, 6,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,740 ft³/s Aug. 7, 1950, gage height, 25.43 ft, at site then in use, from floodmark, from rating curve extended above 3,000 ft³/s; no flow at times in 1946-50, 1952-56.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 334 ft³/s July 4 at 1345, gage height, 7.67 ft, no other peak above base of 300 ft³/s; minimum daily, 2.2 ft³/s Sept. 21, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	6.4	4.8	5.6	8.2	6.5	5.6	11	7.3	4.4	22	9.9
2	4.9	6.2	5.8	5.4	8.2	6.4	7.3	12	6.9	5.4	13	11
3	4.6	5.4	6.0	5.2	8.0	6.4	11	14	6.6	7.5	13	12
4	4.9	5.8	6.2	5.2	7.5	6.5	9.0	10	6.5	186	14	14
5	4.4	5.7	6.0	5.8	7.1	6.1	8.2	9.8	6.4	56	15	16
6	4.0	5.5	5.6	6.2	6.8	6.1	7.7	11	6.0	17	28	16
7	3.8	5.2	5.8	6.0	6.9	6.0	7.4	12	5.7	15	29	14
8	3.5	5.5	6.2	5.6	7.0	5.4	7.4	11	5.7	14	17	9.1
9	3.8	6.1	6.0	5.4	6.8	5.5	7.3	10	5.9	11	9.2	6.0
10	4.0	5.9	5.4	5.4	6.6	5.5	7.2	9.7	6.0	7.0	9.3	6.1
11	3.8	5.4	4.7	5.2	6.6	5.9	7.0	9.0	6.8	4.8	8.9	5.1
12	4.0	5.3	4.7	5.0	6.6	5.8	6.3	8.6	7.1	6.4	8.4	3.5
13	4.2	5.4	4.9	4.2	6.1	5.6	5.7	11	6.2	12	10	2.7
14	4.2	5.2	4.6	4.3	6.0	5.4	5.6	9.8	5.8	15	9.3	2.9
15	4.2	5.1	4.7	4.0	6.2	5.4	5.5	8.4	5.6	16	9.9	2.6
16	3.9	4.9	3.9	4.2	6.7	5.1	5.7	7.9	8.3	19	9.6	3.0
17	4.0	5.0	4.0	4.5	6.6	5.1	5.5	7.8	11	17	11	4.1
18	4.2	5.2	3.3	3.9	7.2	5.6	5.6	9.7	8.5	15	11	4.3
19	4.9	5.5	3.5	3.7	7.0	8.0	5.4	8.9	5.9	15	11	9.6
20	5.3	5.5	3.2	5.4	6.6	7.0	5.2	7.7	5.6	20	16	2.5
21	4.9	5.6	2.9	5.2	6.8	7.2	13	7.3	7.5	17	21	2.2
22	5.2	5.7	2.7	7.0	6.9	7.4	16	6.9	7.9	9.2	30	2.3
23	5.8	5.6	3.2	6.8	7.2	6.3	11	6.7	5.6	8.5	13	2.2
24	6.1	5.5	3.5	7.2	7.5	6.3	9.3	6.6	5.2	8.2	16	2.3
25	6.8	5.5	3.4	8.0	7.6	7.0	7.3	6.8	5.1	7.7	12	2.3
26	7.4	5.6	3.6	9.0	7.6	7.0	6.4	7.6	4.8	9.2	9.1	2.4
27	7.5	5.8	4.0	8.6	7.2	6.7	5.7	7.5	25	18	7.7	2.3
28	7.0	9.0	4.8	9.6	6.6	6.0	5.4	6.8	9.9	21	7.5	2.4
29	6.9	7.0	4.2	11	6.6	5.6	8.3	6.6	27	23	9.2	2.4
30	6.6	5.0	4.0	9.6	---	5.4	15	7.1	17	26	8.6	2.5
31	6.7	---	4.5	8.3	---	5.6	---	7.4	---	25	11	---
TOTAL	156.1	170.5	140.1	190.5	202.7	189.8	234.0	276.6	248.8	636.3	419.7	177.7
MEAN	5.04	5.68	4.52	6.15	6.99	6.12	7.80	8.92	8.29	20.5	13.5	5.92
MAX	7.5	9.0	6.2	11	8.2	8.0	16	14	27	186	30	16
MIN	3.5	4.9	2.7	3.7	6.0	5.1	5.4	6.6	4.8	4.4	7.5	2.2
AC-FT	310	338	278	378	402	376	464	549	493	1260	832	352

CAL YR 1983	TOTAL	3564.2	MEAN	9.76	MAX	195	MIN	2.4	AC-FT	7070
WTR YR 1984	TOTAL	3042.8	MEAN	8.31	MAX	186	MIN	2.2	AC-FT	6040

AVAILABLE

06837000 REPUBLICAN RIVER AT MCCOOK, NE

LOCATION.--Lat 40°11'15", long 100°37'05", in SW1/4NE1/4 sec.32, T.3 N., R.29 W., Red Willow County, Hydrologic Unit 10250004, on left bank 25 ft downstream from bridge on U.S. Highway 83 at south edge of McCook, 2.5 mi downstream from Driftwood Creek, and 10.5 mi upstream from Red Willow Creek.

DRAINAGE AREA.--12,310 mi^2, approximately, of which about 6,260 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to June 1932, October 1954 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,456.37 ft National Geodetic Vertical Datum of 1929. October 1930 to June 1932, nonrecording gage on former highway bridge 325 ft upstream at different datum and October 1954 to Mar. 13, 1959, on highway bridge 25 ft upstream at present datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station and by storage in Bonny Reservoir, Enders Reservoir (station 06832000), and Swanson Lake (station 06829000).

AVERAGE DISCHARGE.--31 years, 181 ft^3/s, 131,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,890 ft^3/s Mar. 21, 1960, gage height, 9.14 ft; no flow for several days in July and August 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred May 31, 1935, discharge, about 245,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,040 ft^3/s June 18, gage height, 6.17 ft from floodmark; minimum daily, 40 ft^3/s Dec. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	72	50	88	145	139	140	225	167	145	145	108
2	52	72	62	84	190	137	160	221	155	143	148	102
3	54	74	64	76	170	137	171	247	148	162	140	106
4	55	76	68	80	165	137	170	225	149	579	138	104
5	52	79	66	92	155	136	163	216	146	400	133	102
6	53	82	60	100	140	135	157	265	142	338	135	99
7	55	83	62	98	150	132	156	283	133	276	149	99
8	59	85	70	94	160	129	155	328	135	248	133	109
9	61	94	86	90	186	125	156	441	145	232	129	114
10	58	92	76	92	178	124	150	437	139	214	134	112
11	55	91	80	94	172	125	146	428	158	198	134	96
12	55	92	82	90	160	123	142	426	159	193	126	157
13	58	92	84	66	158	124	136	438	154	190	120	89
14	61	96	72	70	156	126	132	418	228	190	116	74
15	62	95	78	74	157	127	131	412	195	188	116	63
16	65	97	76	72	160	126	128	405	163	191	118	62
17	66	97	78	76	156	128	128	400	572	192	118	59
18	66	95	52	56	168	128	121	421	645	183	117	58
19	64	94	54	54	150	120	112	393	260	170	117	58
20	65	97	48	64	145	144	126	375	203	165	122	48
21	68	95	41	62	147	150	224	369	205	155	150	45
22	72	96	40	86	148	150	265	324	194	140	156	47
23	75	96	45	82	156	151	262	290	178	130	135	51
24	71	96	52	106	155	152	220	275	167	128	115	54
25	68	96	50	114	157	151	193	277	160	129	117	56
26	64	88	60	130	158	148	173	273	161	131	115	56
27	65	80	90	120	154	145	151	269	156	142	113	56
28	67	74	86	120	146	142	149	263	159	148	112	56
29	69	70	60	140	144	138	190	267	154	144	109	55
30	72	52	62	130	---	136	258	263	161	145	106	56
31	73	---	70	135	---	142	---	191	---	142	104	---
TOTAL	1931	2598	2024	2835	4586	4207	4965	10065	5891	6131	3920	2351
MEAN	62.3	86.6	65.3	91.5	158	136	166	325	196	198	126	78.4
MAX	75	97	90	140	190	152	265	441	645	579	156	157
MIN	51	52	40	54	140	120	112	191	133	128	104	45
AC-FT	3830	5150	4010	5620	9100	8340	9850	19960	11680	12160	7780	4660

CAL YR 1983	TOTAL	65693	MEAN	180	MAX	529	MIN	28	AC-FT	130300
WTR YR 1984	TOTAL	51504	MEAN	141	MAX	645	MIN	40	AC-FT	102200

KANSAS RIVER BASIN

06837000 REPUBLICAN RIVER AT MC COOK, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1967 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1966 to current year.

INSTRUMENTATION.--Temperature recorder since Dec. 13, 1966.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 38.5°C June 24, 1971; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 34.0°C Aug. 15, 1984; minimum, 0.0°C on many days during winter period.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.0	18.5	18.0	13.0	.0	.0	---	---	.5	.0	9.5	1.5
2	19.5	16.5	15.0	9.5	.0	.0	---	---	.5	.0	5.5	3.5
3	15.0	14.5	14.5	13.0	.0	.0	---	---	.5	.0	5.0	2.0
4	13.5	11.0	14.5	12.0	.0	.0	---	---	.5	.0	7.0	2.0
5	13.0	9.5	13.5	11.5	.0	.0	---	---	.5	.0	6.0	1.0
6	13.0	9.0	15.5	10.0	.0	.0	---	---	.0	.0	5.0	.0
7	13.0	9.5	14.5	8.5	.0	.0	---	---	.5	.0	6.0	.0
8	11.5	9.0	13.5	7.0	.0	.0	---	---	3.5	.0	6.0	.0
9	9.0	8.0	8.0	5.5	.0	.0	---	---	5.5	.0	---	---
10	11.5	9.0	6.0	3.5	.0	.0	---	---	6.5	.0	---	---
11	11.5	9.5	6.5	3.5	.0	.0	---	---	3.5	2.0	---	---
12	9.0	7.0	9.5	5.0	.0	.0	---	---	6.0	.5	8.0	1.0
13	9.0	5.5	9.0	4.5	.0	.0	---	---	5.0	.5	12.0	3.0
14	9.0	6.0	7.0	4.5	.0	.0	---	---	9.0	2.0	12.0	5.5
15	---	---	7.0	3.0	.0	.0	---	---	7.0	3.0	13.5	6.0
16	---	---	6.5	2.0	.5	.0	---	---	8.0	1.0	8.0	2.0
17	---	---	8.0	3.5	.0	.0	---	---	7.0	.5	10.5	1.5
18	13.5	11.5	6.5	4.5	.0	.0	---	---	3.0	.0	6.0	.0
19	16.5	11.5	6.0	4.5	.0	.0	---	---	6.0	.0	3.0	.0
20	10.0	9.0	5.0	1.0	.0	.0	---	---	6.0	.0	12.0	1.0
21	12.0	9.0	4.0	1.5	.0	.0	---	---	7.0	.0	13.0	4.0
22	15.0	8.5	3.0	1.5	.0	.0	---	---	9.0	.5	9.5	5.0
23	16.0	6.0	2.0	.5	---	---	.0	.0	9.0	2.0	10.0	5.5
24	15.5	9.0	1.5	.0	---	---	.0	.0	9.0	1.5	15.0	5.0
25	14.5	9.5	2.0	.0	---	---	.5	.0	8.5	3.5	13.0	6.5
26	15.5	6.5	1.5	.0	---	---	.5	.0	5.0	3.0	10.5	8.0
27	13.5	8.5	.0	.0	---	---	.0	.0	5.5	.5	9.0	6.0
28	13.0	8.0	.0	.0	---	---	.0	.0	5.5	.0	6.5	4.5
29	15.0	9.5	.0	.0	---	---	.5	.0	7.0	.0	10.0	3.5
30	14.0	11.0	.0	.0	---	---	.5	.0	---	---	8.0	4.0
31	---	---	---	---	---	---	.5	.0	---	---	7.0	5.0
MONTH	22.0	5.5	18.0	.0	.5	.0	.5	.0	9.0	.0	15.0	.0

06837000 REPUBLICAN RIVER AT MC COOK, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.5	5.0	13.0	9.0	27.0	19.5	24.5	22.0	24.5	22.0	25.0	19.5
2	5.5	1.5	12.0	9.5	26.0	15.5	30.0	20.0	28.5	20.0	25.0	18.0
3	4.5	3.0	15.0	9.5	24.5	18.0	30.0	21.5	31.5	21.5	28.0	16.0
4	14.0	3.0	18.0	12.0	26.0	16.5	23.0	19.5	31.0	21.0	26.0	14.5
5	15.5	5.0	15.0	12.0	25.5	18.5	26.5	20.0	33.0	22.0	25.5	15.0
6	16.5	4.5	16.5	11.5	25.5	16.0	25.5	23.0	33.0	22.0	29.0	15.5
7	17.0	10.5	16.0	12.0	25.5	17.0	26.5	21.0	29.5	23.5	20.5	17.0
8	13.5	10.0	16.0	12.0	26.0	15.5	27.0	23.0	33.0	21.5	25.0	13.5
9	11.5	10.5	16.0	13.5	24.5	16.5	28.5	23.5	28.5	21.5	26.5	15.5
10	11.5	10.0	16.5	14.5	24.5	15.5	29.5	23.0	30.5	19.5	27.0	16.5
11	14.5	10.5	19.5	16.0	25.5	18.0	29.0	20.5	31.0	20.5	18.5	16.0
12	16.0	6.5	20.5	17.0	25.0	19.0	29.0	20.5	30.5	21.0	26.0	16.0
13	14.5	6.5	21.5	18.5	29.0	20.0	29.5	22.0	30.5	21.5	16.0	13.0
14	14.0	7.0	20.0	18.5	28.0	21.5	30.0	23.5	31.0	20.0	---	---
15	18.0	7.0	21.5	18.0	29.5	22.0	28.5	24.0	34.0	23.0	---	---
16	19.5	8.0	22.0	19.0	29.5	22.0	31.5	24.0	33.0	22.0	---	---
17	20.5	9.0	21.0	19.5	25.0	22.0	30.5	22.0	33.5	22.0	25.5	25.5
18	15.0	8.5	19.5	18.5	26.0	21.0	30.5	22.0	31.0	23.5	27.0	13.5
19	14.5	7.0	20.0	18.0	28.0	21.0	31.0	21.5	30.5	21.5	26.5	14.5
20	10.5	2.0	21.0	18.0	29.5	21.5	30.0	23.5	29.0	21.5	25.5	14.5
21	6.0	2.0	21.5	19.0	30.5	23.0	31.0	23.5	28.5	21.5	24.0	14.0
22	10.5	4.5	22.0	20.0	30.5	23.5	31.0	22.0	29.5	20.5	22.0	15.0
23	16.0	5.5	23.0	19.0	30.0	21.5	33.0	22.0	29.0	21.0	26.0	15.0
24	18.0	10.0	24.5	20.0	29.5	19.5	32.0	23.5	29.0	19.5	18.0	11.5
25	20.5	11.0	22.0	20.0	31.0	20.0	32.0	23.0	30.5	20.5	16.5	7.0
26	19.0	12.0	19.0	17.0	31.5	21.5	29.5	23.0	31.0	21.5	10.5	8.0
27	15.0	7.0	21.0	16.5	31.0	21.5	29.5	19.0	31.0	20.5	13.0	7.0
28	11.5	6.0	19.5	17.0	31.5	21.5	29.0	19.5	31.0	19.5	12.0	6.5
29	10.0	5.0	21.5	16.0	31.0	22.0	26.0	20.0	31.0	19.5	14.5	5.0
30	14.0	4.5	23.5	15.5	30.0	22.0	30.5	20.0	28.5	19.5	16.0	[illegible]
31	---	---	28.5	17.0	---	---	29.5	21.5	28.5	17.0	---	---
MONTH	20.5	1.5	28.5	9.0	31.5	15.5	33.0	19.0	34.0	17.0	29.0	5.0
YEAR	34.0	.0										

06837300 RED WILLOW CREEK ABOVE HUGH BUTLER LAKE, NE

LOCATION.--Lat 40°24'05", long 100°46'45", in NE1/4SE1/4 sec.13, T.5 N., R.31 W., Hayes County, Hydrologic Unit 10250007, on right bank 1,000 ft above county road bridge, 7.2 mi upstream from Red Willow Dam, and 12 mi northeast of Culbertson.

DRAINAGE AREA.--600 mi^2, approximately, of which about 200 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Artificial control since March 1961. Datum of gage is 2,594.80 ft National Geodetic Vertical Datum of 1929. Prior to Mar. 23, 1961, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by pump irrigation development above station.

AVERAGE DISCHARGE.--24 years, 28.0 ft^3/s, 20,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,020 ft^3/s June 16, 1972, gage height, 13.27 ft, from rating curve extended above 1,000 ft^3/s on basis of slope-conveyance study; minimum daily, 4.0 ft^3/s July 4, 5, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 17	1830	*411	3.80
July 4	0900	250	3.00

Minimum daily discharge, 7.3 ft^3/s Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	16	10	21	38	30	33	59	21	24	8.2	7.6
2	14	16	15	21	40	30	36	69	20	22	9.3	7.7
3	14	16	18	22	36	31	46	71	20	21	11	8.2
4	13	16	20	24	38	33	43	69	22	89	11	8.9
5	13	16	19	25	36	31	41	64	22	28	11	8.8
6	13	16	17	26	35	30	49	62	20	26	10	8.7
7	13	16	16	27	33	28	56	57	20	25	10	8.7
8	12	17	17	29	34	28	55	58	19	23	10	8.5
9	13	17	18	32	40	24	56	53	19	22	9.4	8.4
10	13	18	20	34	40	22	45	43	20	20	9.7	7.8
11	13	19	23	31	38	24	38	37	23	18	9.0	7.9
12	13	19	24	26	37	24	35	34	27	17	8.3	8.9
13	13	20	24	20	35	25	35	32	61	15	8.1	8.5
14	13	20	21	15	33	26	33	31	74	15	8.7	8.7
15	13	20	17	14	33	27	30	29	61	14	9.9	9.0
16	13	19	16	13	37	27	29	27	164	14	10	9.0
17	14	19	17	14	40	28	34	25	357	14	11	9.2
18	13	19	15	11	27	28	33	27	204	13	7.3	9.2
19	13	18	16	10	26	25	38	32	83	13	9.0	9.4
20	14	19	12	13	27	30	50	40	53	11	9.6	9.4
21	15	19	9.0	14	30	35	62	52	48	11	9.7	9.6
22	15	18	8.0	22	35	41	76	44	58	10	10	9.6
23	15	18	9.0	21	36	35	87	36	50	10	15	9.8
24	15	17	12	29	40	30	85	29	36	9.5	12	9.8
25	15	19	11	32	42	27	65	26	30	11	10	10
26	16	17	13	35	47	27	45	25	28	11	7.9	10
27	16	12	18	33	45	27	35	24	27	9.3	7.5	11
28	16	12	17	34	38	30	30	25	26	8.1	8.6	11
29	16	11	16	38	33	34	35	24	25	7.8	7.8	12
30	16	11	14	35	---	34	40	22	24	8.1	7.3	12
31	16	---	20	36	---	33	---	22	---	9.2	7.6	---
TOTAL	436	510	502.0	757	1049	904	1375	1248	1662	549.0	293.9	277.3
MEAN	14.1	17.0	16.2	24.4	36.2	29.2	45.8	40.3	55.4	17.7	9.48	9.24
MAX	16	20	24	38	47	41	87	71	357	89	15	12
MIN	12	11	8.0	10	26	22	29	22	19	7.8	7.3	7.6
AC-FT	865	1010	996	1500	2080	1790	2730	2480	3300	1090	583	550

CAL YR 1983	TOTAL	8470.5	MEAN	23.2	MAX	88	MIN	5.8	AC-FT	16800
WTR YR 1984	TOTAL	9563.2	MEAN	26.1	MAX	357	MIN	7.3	AC-FT	18970

06837390 HUGH BUTLER LAKE NEAR MCCOOK, NE

LOCATION.--Lat 40°21'35", long 100°39'55", in SW1/4NW1/4 sec.31, T.5 N., R.29 W., Frontier County, Hydrologic Unit 10250007, in gate-control house at outlet tube of Red Willow Dam on Red Willow Creek, 12 mi north of McCook.

DRAINAGE AREA.--730 mi², approximately, of which about 310 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--September 1961 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to July 10, 1962, nonrecording gage at present datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began Sept. 5, 1961. Capacity, 31,470 acre-ft between elevations 2,522.0 ft, sill of outlet works, and 2,581.8 ft, top of irrigation pool. Top of flood-control pool and crest of mean spillway at elevation 2,604.9 ft, capacity, 86,360 acre-ft. Top of superstorage flood control pool at elevation 2,627.8 ft, capacity, 162,600 acre-ft. Dead storage, 6,310 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 41,680 acre-ft July 15, 16, 1967, elevation, 2,584.14 ft; minimum since operation of reservoir began, 16,930 acre-ft Sept. 8, 1978, elevation, 2,565.31 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 37,470 acre-ft June 19, elevation, 2,581.61 ft; minimum, 25,980 acre-ft Oct. 1, 4-6, elevation, 2,573.56 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

2,570	21,800	2,580	34,910
2,575	27,800	2,585	43,170

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25980	26370	27100	28050	29200	30810	32150	34560	35940	37000	32760	28590
2	26000	26390	27120	28080	29270	30850	32370	34760	35930	36900	32640	28490
3	26000	26420	27160	28130	29340	30910	32450	34910	35900	36770	32520	28370
4	25980	26440	27210	28130	29390	30960	32480	34990	35940	36850	32450	28260
5	25980	26480	27250	28180	29430	30980	32540	35180	35970	36840	32340	28170
6	25980	26490	27350	28240	29500	31030	32670	35350	35930	36670	32240	28100
7	26000	26530	27380	28260	29560	31060	32760	35410	35910	36580	32080	28040
8	26000	26580	27400	28300	29600	31070	32820	35470	35910	36510	31940	27960
9	26000	26610	27430	28340	29660	31080	32890	35570	35940	36400	31750	27870
10	26030	26610	27470	28380	29700	31130	32970	35640	35910	36290	31610	27740
11	26030	26620	27520	28430	29790	31140	33080	35690	36050	36130	31440	27830
12	26020	26690	27560	28470	29830	31200	33070	35740	36090	35970	31280	27840
13	26020	26730	27600	28470	29870	31240	33110	35740	36150	35850	31100	27810
14	26020	26720	27630	28530	29950	31310	33110	35750	36240	35670	30940	27800
15	26050	26720	27670	28570	30000	31310	33130	35740	36340	35500	30810	27770
16	26060	26760	27670	28570	30030	31340	33130	35770	36630	35410	30680	27750
17	26080	26780	27700	28610	30100	31380	33140	35820	37130	35270	30540	27760
18	26110	26860	27710	28620	30250	31520	33160	35860	37450	35110	30380	27790
19	26120	26860	27740	28620	30250	31630	33160	35850	37470	34970	30250	27790
20	26130	26870	27750	28640	30280	31690	33380	35860	37450	34790	30110	27770
21	26160	26880	27790	28680	30330	31730	33520	35900	37450	34620	30000	27790
22	26180	26900	27810	28740	30380	31790	33650	35940	37450	34450	29880	27760
23	26200	26870	27870	28760	30440	31840	33850	35930	37450	34290	29750	27760
24	26210	26880	27870	28800	30480	31890	34000	35960	37400	34110	29640	27740
25	26220	26920	27910	28860	30550	31930	34170	35970	37390	33960	29560	27670
26	26240	26950	27960	28900	30620	31970	34260	35930	37320	33760	29450	27620
27	26270	27110	27520	28920	30700	32020	34170	35970	37240	33580	29320	27630
28	26270	27070	27930	28950	30700	32030	34160	35900	37230	33410	29150	27610
29	26280	27080	27930	29010	30770	32050	34400	35900	37140	33260	29010	27610
30	26290	27080	27980	29050	---	32080	34460	35930	37080	33080	28860	27600
31	26330	---	28040	29130	---	32120	---	35940	---	32910	28700	---
MAX	26330	27110	28040	29130	30770	32120	34460	35970	37470	37000	32760	28590
MIN	25980	26370	27100	28050	29200	30810	32150	34560	35900	32910	28700	27600
(†)	2573.84	2574.44	2575.18	2576.01	2577.20	2578.15	2579.71	2580.66	2581.37	2578.68	2575.68	2574.84
(††)	+360	+750	+960	+1090	+1640	+1350	+2340	+1480	+1140	-4170	-4210	-1100

CAL YR 1983 MAX 37390 MIN 25850 (††) -670
WTR YR 1984 MAX 37470 MIN 25980 (††) +1630

(†) Elevation, in feet, at end of month.
(††) Change in contents, in acre-feet.

06837500 RED WILLOW CREEK NEAR MCCOOK, NE

LOCATION.--Lat 40°20'50", long 100°38'35", in SW1/4NW1/4 sec.6, T.4 N., R.29 W., Red Willow County, Hydrologic Unit 10250007, on left bank 45 ft downstream from bridge on U.S. Highway 83, 3 mi downstream from Red Willow Dam and 10 mi north of McCook.

DRAINAGE AREA.--740 mi², approximately, of which about 320 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to September 1947. Annual maximums, water years 1958-60. October 1960 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder, concrete control since Dec. 23, 1965. Datum of gage is 2,485.97 ft National Geodetic Vertical Datum of 1929. October 1940 to September 1947, water-stage recorder at site 45 ft upstream at datum 9.55 ft higher. Nov. 22, 1957, to Sept. 30, 1960, crest-stage gage, Oct. 1, 1960, to Apr. 5, 1961, nonrecording gage, and Apr. 6, 1961, to Sept. 26, 1974, water-stage recorder at site 45 ft upstream, present datum.

REMARKS.--Records good. Natural flow affected by irrigation development above station and, since Sept. 5, 1961, by storage in Hugh Butler Lake (station 06837390).

AVERAGE DISCHARGE.--23 years (1962-84), 20.6 ft³/s, 14,930 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s June 22, 1947, gage height, 31.95 ft, present datum, from rating curve extended above 2,500 ft³/s on basis of contracted-opening measurement of peak flow; minimum daily, 0.60 ft³/s Sept. 22, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1935, reached a stage of 33.45 ft, from floodmarks, discharge, 45,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 91 ft³/s July 30, gage height, 9.14 ft; minimum daily, 3.2 ft³/s Jan. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.8	3.8	3.9	3.9	3.9	4.1	4.7	4.4	39	77	52
2	3.5	3.9	3.9	3.9	3.9	3.9	4.6	4.8	4.0	55	70	53
3	3.5	3.9	3.9	3.9	3.6	3.9	4.5	4.9	4.1	62	63	50
4	3.3	3.6	3.9	3.8	3.5	3.9	4.5	4.8	4.0	71	60	50
5	3.5	3.5	3.9	3.3	3.5	3.9	4.3	5.1	3.9	66	61	45
6	3.5	3.7	4.0	3.3	3.8	3.9	4.3	5.7	4.0	58	71	41
7	3.5	3.9	4.1	3.2	4.1	3.9	4.3	4.8	4.0	54	83	35
8	3.5	3.9	4.1	3.3	4.0	4.0	4.3	4.5	4.0	54	84	29
9	3.5	4.1	4.1	3.4	3.4	4.1	4.3	4.4	4.4	59	88	28
10	3.5	4.1	4.1	3.5	3.9	4.0	4.3	4.1	4.5	74	86	28
11	3.5	3.9	3.7	3.7	3.9	3.7	4.3	4.3	5.1	71	84	28
12	3.5	3.9	3.6	3.7	3.7	4.0	4.2	4.3	4.5	70	84	4.5
13	3.6	3.9	3.8	3.7	3.7	4.1	4.1	4.3	4.1	76	83	3.6
14	3.7	3.9	3.7	3.7	3.7	4.1	4.1	4.3	4.2	75	76	3.4
15	3.7	3.9	3.7	3.7	3.8	4.1	4.1	4.3	4.5	75	67	3.5
16	3.7	3.9	3.7	3.8	4.2	4.1	4.2	4.2	4.5	73	64	3.5
17	3.3	3.9	3.7	3.9	4.1	4.1	4.3	4.0	4.4	72	64	3.5
18	3.4	3.9	3.7	3.7	4.4	4.3	4.4	4.3	23	74	64	3.5
19	3.8	3.9	3.7	3.8	4.2	4.6	4.5	4.3	60	81	67	3.5
20	3.9	3.9	3.7	3.9	4.1	4.5	5.1	4.3	48	80	79	3.3
21	3.9	3.9	3.9	3.9	4.1	4.5	6.3	4.3	34	80	75	3.3
22	3.9	3.9	3.9	3.9	3.8	4.5	5.2	4.2	34	80	70	3.3
23	3.8	3.9	3.9	3.9	3.9	4.5	4.7	4.0	34	81	68	3.4
24	3.7	3.9	3.9	3.9	3.9	4.5	4.7	4.0	34	84	61	3.5
25	3.7	3.9	3.9	3.9	3.9	4.5	4.5	4.2	34	83	56	3.5
26	3.8	3.9	4.1	3.9	3.9	4.3	4.5	4.3	35	83	58	3.5
27	3.9	3.7	4.1	3.9	3.9	4.1	4.4	4.3	35	80	67	3.5
28	3.7	4.5	4.0	4.0	3.9	4.0	4.3	4.3	36	77	78	3.5
29	3.5	4.2	3.9	4.3	3.7	3.9	5.8	4.1	36	77	72	3.7
30	3.5	3.7	3.9	4.3	---	3.9	5.0	4.2	35	89	68	3.7
31	3.5	---	3.9	4.2	---	4.1	---	4.5	---	83	61	---
TOTAL	111.8	116.9	120.2	117.2	112.4	127.8	136.2	136.8	550.6	2236	2209	506.2
MEAN	3.61	3.90	3.88	3.78	3.88	4.12	4.54	4.41	18.4	72.1	71.3	16.9
MAX	3.9	4.5	4.1	4.3	4.4	4.6	6.3	5.7	60	89	88	53
MIN	3.3	3.5	3.6	3.2	3.4	3.7	4.1	4.0	3.9	39	56	3.3
AC-FT	222	232	238	232	223	253	270	271	1090	4440	4380	1000

CAL YR 1983	TOTAL	6747.7	MEAN	18.5	MAX	125	MIN	3.3	AC-FT 13380
WTR YR 1984	TOTAL	6481.1	MEAN	17.7	MAX	89	MIN	3.2	AC-FT 12860

06838000 RED WILLOW CREEK NEAR RED WILLOW, NE

LOCATION.--Lat 40°14'10", long 100°30'00", in NE1/4NE1/4 sec.17, T.3 N., R.28 W., Red Willow County, Hydrologic Unit 10250007, on left bank near downstream side of bridge on U.S. Highways 6 and 34, 0.8 mi north of Red Willow and 2.5 mi upstream from mouth.

DRAINAGE AREA.--830 mi^2, approximately, of which about 410 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--September 1939 to current year.

REVISED RECORDS.--WSP 1510: 1945(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,398.64 ft National Geodetic Vertical Datum of 1929. Prior to May 26, 1945, nonrecording gage at bridge 1.2 mi upstream at datum 11.16 ft higher, May 26, 1945, to Aug. 2, 1974, water-stage recorder at present site and datum, and Aug. 3, 1974, to June 27, 1980, on right bank at downstream side of bridge, present datum.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station, since Sept. 5, 1961, by storage in Hugh Butler Lake (station 06837390), and since June 1963 by Red Willow Canal which diverts 4.5 mi above station for irrigation of about 4,150 acres.

AVERAGE DISCHARGE.--22 years (1963-84), 14.8 ft^3/s, 10,720 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft^3/s June 22, 1947, gage height, 18.36 ft, from rating curve extended above 6,800 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.33 ft^3/s Sept. 8, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 70 ft^3/s Sept. 17, gage height, 4.77 ft; maximum gage height, 5.00 ft Jan. 15, backwater from ice; minimum daily, 0.90 ft^3/s July 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	7.1	3.6	6.6	8.6	10	9.3	11	11	10	8.6	8.7
2	5.3	7.6	5.0	6.8	9.0	10	12	11	11	12	8.5	8.3
3	5.7	7.6	6.6	6.4	8.0	10	12	10	11	8.5	7.5	9.6
4	6.3	7.6	8.4	6.8	7.8	10	10	9.8	11	22	3.4	10
5	6.3	7.3	8.8	8.4	7.4	10	9.4	10	11	32	1.7	6.5
6	6.9	7.3	8.0	12	7.6	10	9.0	12	12	20	3.1	4.7
7	6.9	7.3	8.2	12	10	10	9.4	12	9.5	15	6.8	9.3
8	6.9	7.4	8.6	11	9.6	9.6	9.3	11	8.8	15	4.8	4.6
9	6.7	8.0	9.2	9.6	9.6	8.8	9.0	11	9.5	14	7.6	3.4
10	6.3	7.6	7.0	9.8	10	10	9.1	11	9.1	19	9.9	3.8
11	6.1	7.7	7.2	10	11	10	9.4	11	11	10	9.6	5.4
12	6.0	7.8	8.0	10	10	10	9.0	11	9.4	7.5	9.3	7.5
13	6.2	7.8	7.6	8.6	11	10	8.5	11	8.5	7.6	9.4	4.8
14	6.3	7.9	6.8	8.4	13	11	7.8	10	7.8	6.5	12	4.4
15	6.6	7.8	7.0	7.6	16	11	8.8	11	7.6	6.0	8.2	4.9
16	6.4	7.8	6.8	7.2	13	10	11	10	11	8.1	3.2	4.6
17	6.2	7.7	7.6	7.6	11	11	9.3	11	12	7.6	5.3	14
18	5.8	7.6	5.4	6.0	8.0	9.2	9.0	11	6.1	5.5	5.7	5.6
19	6.2	7.7	5.6	5.6	9.0	8.8	9.0	11	12	7.7	5.8	5.3
20	6.2	7.7	4.5	7.0	12	13	12	10	31	4.3	9.5	5.3
21	6.8	8.1	3.2	6.8	10	11	17	9.6	18	3.3	7.2	4.8
22	6.8	8.0	3.0	8.0	11	10	14	9.6	20	2.6	7.7	4.2
23	6.4	8.1	3.3	7.6	10	10	12	9.2	19	3.3	5.1	5.4
24	6.3	7.0	3.5	9.2	10	10	11	9.3	19	6.6	5.1	5.4
25	6.3	6.4	3.4	9.6	10	10	11	10	19	6.3	4.1	5.6
26	6.8	6.8	4.0	10	10	10	11	11	12	5.4	3.2	5.6
27	7.1	8.0	5.2	11	10	10	10	11	12	4.7	3.0	5.6
28	6.8	4.3	4.8	10	10	9.6	9.6	11	12	1.6	5.7	5.6
29	6.6	4.0	4.2	9.4	10	9.5	13	11	10	.90	10	5.4
30	6.8	3.8	4.4	9.0	---	9.4	13	11	11	4.0	9.8	6.0
31	7.0	---	5.4	8.2	---	9.7	---	10	---	9.8	15	---
TOTAL	198.3	216.8	184.3	266.2	292.6	311.6	313.9	328.5	372.3	286.80	215.8	184.3
MEAN	6.40	7.23	5.95	8.59	10.1	10.1	10.5	10.6	12.4	9.25	6.96	6.14
MAX	7.1	8.1	9.2	12	16	13	17	12	31	32	15	14
MIN	5.3	3.8	3.0	5.6	7.4	8.8	7.8	9.2	6.1	.90	1.7	3.4
AC-FT	393	430	366	528	580	618	623	652	738	569	428	366

CAL YR 1983 TOTAL 4212.7 MEAN 11.5 MAX 73 MIN 1.8 AC-FT 8360
WTR YR 1984 TOTAL 3171.40 MEAN 8.67 MAX 32 MIN .90 AC-FT 6290

KANSAS RIVER BASIN

06840000 FOX CREEK AT CURTIS, NE

LOCATION.--Lat 40°38'00", long 100°29'20", in SE1/4NW1/4 sec.27, T.8 N., R.28 W., Frontier County, Hydrologic Unit 10250008, on left bank 15 ft upstream from bridge on State Highway 23, 0.5 mi upstream from mouth, and 1 mi east of Curtis.

DRAINAGE AREA.--74 mi², approximately.

PERIOD OF RECORD.--March 1951 to September 1958. Annual maximums, water years 1960-70. October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,519.58 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--14 years (1952-58, 1978-84), 6.94 ft³/s, 5,030 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,340 ft³/s May 31, 1951, gage height, 15.35 ft; minimum daily, 0.71 ft³/s July 26, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 27.3 ft June 21, 1947, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 782 ft³/s June 12, gage height, 12.30 ft from floodmark; minimum daily, 2.4 ft³/s Aug. 25-27, Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	4.8	5.0	5.8	6.1	6.7	5.6	15	6.2	6.7	4.5	3.8
2	6.3	5.0	5.9	5.8	6.1	6.7	6.4	18	5.9	7.5	4.9	3.1
3	6.2	4.8	5.9	5.8	6.1	6.7	7.3	14	5.9	6.9	4.5	2.4
4	6.0	4.8	5.9	5.9	6.1	6.6	7.2	8.6	6.1	66	5.3	4.0
5	5.8	5.0	5.8	6.2	5.8	6.4	6.9	8.1	6.0	8.9	4.6	3.9
6	5.3	5.1	5.7	6.2	5.9	6.3	6.3	16	5.9	7.6	4.6	4.1
7	5.1	4.8	5.6	6.1	5.9	6.4	9.9	11	5.7	7.2	4.5	4.1
8	5.0	4.2	5.6	5.9	6.0	6.2	7.3	7.9	5.7	7.0	3.3	4.1
9	4.8	4.9	5.7	5.6	6.1	6.3	6.2	7.6	6.4	6.7	2.9	4.1
10	4.8	4.9	5.6	5.5	6.1	6.1	6.4	7.4	6.3	12	2.9	4.1
11	4.3	4.7	5.6	5.5	6.2	6.5	6.7	7.1	7.7	27	3.6	4.0
12	4.3	4.6	5.6	5.5	6.2	6.4	6.9	6.8	217	6.5	2.5	4.2
13	4.3	4.7	5.7	4.7	6.0	6.3	6.2	6.7	21	6.3	3.3	4.2
14	4.1	4.8	5.6	4.6	6.0	6.3	6.1	6.3	9.7	6.2	3.0	4.1
15	4.6	4.8	5.3	5.0	6.3	6.3	6.1	6.0	8.2	6.1	3.7	4.0
16	4.6	4.7	4.9	4.9	6.7	6.0	6.2	6.0	19	6.1	3.8	3.9
17	4.5	4.6	5.3	5.2	6.9	6.0	6.3	6.2	26	6.2	3.4	3.9
18	5.0	4.7	5.2	5.0	5.6	6.1	6.4	6.8	8.8	5.9	3.5	3.8
19	5.0	4.8	5.3	5.2	7.8	6.4	6.4	21	7.9	5.7	3.4	3.6
20	5.3	5.2	5.2	5.5	7.3	6.8	7.2	8.0	7.6	5.6	3.6	3.5
21	5.1	5.2	4.8	5.4	7.3	6.9	15	6.7	7.4	5.6	3.9	3.4
22	4.8	5.0	4.6	5.3	7.3	6.3	13	7.2	7.3	3.8	3.9	3.5
23	4.6	5.0	4.8	5.4	7.3	6.1	8.1	6.9	7.2	3.6	3.9	3.5
24	4.9	5.0	4.8	5.4	7.0	6.0	7.1	6.9	7.3	3.2	2.9	3.5
25	4.9	5.2	5.0	5.5	6.7	5.9	6.9	7.2	7.1	4.1	2.4	3.5
26	4.8	5.2	5.4	5.5	6.4	5.8	6.8	7.0	7.5	3.4	2.4	3.5
27	4.9	5.0	5.7	5.8	6.3	5.8	7.6	6.9	7.1	3.2	2.4	3.7
28	4.8	4.6	5.7	6.3	6.1	5.7	6.9	6.4	9.9	3.2	3.5	3.8
29	4.4	4.5	5.7	6.4	6.4	5.8	10	6.3	7.3	4.0	3.6	3.8
30	4.6	4.4	5.8	6.9	---	5.3	14	6.3	6.9	4.6	3.6	4.0
31	4.6	---	5.7	6.3	---	5.4	---	6.4	---	4.4	3.7	---
TOTAL	154.5	145.0	168.4	174.1	186.0	192.5	229.4	268.7	468.0	261.2	112.0	113.1
MEAN	4.98	4.83	5.43	5.62	6.41	6.21	7.65	8.67	15.6	8.43	3.61	3.77
MAX	6.8	5.2	5.9	6.9	7.8	6.9	15	21	217	66	5.3	4.2
MIN	4.1	4.2	4.6	4.6	5.6	5.3	5.6	6.0	5.7	3.2	2.4	2.4
AC-FT	306	288	334	345	369	382	455	533	928	518	222	224

CAL YR 1983	TOTAL	1926.4	MEAN	5.28	MAX	21	MIN	1.8	AC-FT 3820
WTR YR 1984	TOTAL	247[illegible]9	MEAN	6.76	MAX	217	MIN	2.4	AC-FT 4900

06841000 MEDICINE CREEK ABOVE HARRY STRUNK LAKE, NE

LOCATION.--Lat 40°30'10", long 100°19'20", in SW1/4 sec.7, T.6 N., R.26 W., Frontier County, Hydrologic Unit 10250008, on right bank 0.3 mi downstream from top of Harry Strunk Lake flood-control pool, 2.5 mi upstream from top of irrigation pool, 3.8 mi southeast of Stockville, and 13.5 mi upstream from Medicine Creek Dam.

DRAINAGE AREA.--770 mi², approximately, of which about 530 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--January 1950 to current year. Prior to October 1950, published as "above Medicine Creek Reservoir."

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Concrete control since November 1950. Datum of gage is 2,380.94 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--34 years, 65.6 ft³/s, 47,530 acre-ft/yr; median of yearly mean discharges, 58 ft³/s, 42,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s June 21, 1967, gage height, 20.05 ft; minimum daily, 9.1 ft³/s Aug. 9, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1874, 24.4 ft June 22, 1947, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,360 ft³/s July 4, gage height, 12.83 ft, no other peak above base of 1,200 ft³/s; minimum daily, 22 ft³/s Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	44	40	54	76	52	51	91	51	51	31	25
2	42	44	48	56	74	53	53	101	49	50	33	25
3	40	44	52	58	76	54	57	116	48	51	33	25
4	40	44	50	58	68	55	61	106	50	611	33	24
5	39	45	54	58	91	56	66	91	49	302	32	26
6	39	46	50	60	58	55	71	115	48	149	33	27
7	39	46	48	62	56	55	74	145	47	110	31	26
8	39	46	64	66	54	53	76	99	46	84	31	26
9	40	47	62	66	54	52	74	84	47	71	30	23
10	40	47	60	60	54	52	68	76	47	66	30	24
11	41	47	60	62	55	52	64	71	51	166	28	24
12	41	47	60	58	55	52	63	67	146	73	27	23
13	41	47	58	50	55	53	63	66	243	59	25	24
14	41	47	58	48	54	54	58	63	113	52	25	27
15	42	46	56	49	54	55	56	61	81	48	24	29
16	42	46	54	52	56	55	54	60	83	47	26	30
17	42	44	49	44	58	56	53	59	109	46	25	30
18	42	44	47	40	61	55	53	61	132	45	24	29
19	43	46	50	39	57	78	53	64	97	47	24	28
20	43	44	45	40	56	56	55	78	78	45	24	27
21	43	45	42	44	57	59	68	67	65	42	29	27
22	43	45	36	50	56	62	103	65	58	39	28	26
23	43	44	34	50	57	60	110	60	55	35	27	27
24	43	45	38	52	59	57	94	56	53	34	26	27
25	43	44	42	52	60	56	81	55	53	37	24	28
26	43	45	45	60	61	54	71	54	54	40	25	29
27	43	66	50	64	60	54	65	56	61	35	24	29
28	43	70	52	70	57	54	61	56	76	33	24	30
29	43	60	50	76	54	53	64	55	59	32	25	31
30	43	48	52	72	---	50	75	52	54	31	23	32
31	44	---	50	78	---	50	---	51	---	31	22	---
TOTAL	1303	1423	1556	1748	1743	1712	2015	2301	2203	2562	846	808
MEAN	42.0	47.4	50.2	56.4	60.1	55.2	67.2	74.2	73.4	82.6	27.3	26.9
MAX	53	70	64	78	91	78	110	145	243	611	33	32
MIN	39	44	34	39	54	50	51	51	46	31	22	23
AC-FT	2580	2820	3090	3470	3460	3400	4000	4560	4370	5080	1680	1600

CAL YR 1983 TOTAL 17930 MEAN 49.1 MAX 168 MIN 16 AC-FT 35560
WTR YR 1984 TOTAL 20220 MEAN 55.2 MAX 611 MIN 22 AC-FT 40110

06842000 HARRY STRUNK LAKE NEAR CAMBRIDGE, NE

LOCATION.--Lat 40°22'40", long 100°13'00", in NE1/4 sec.25, T.5 N., R.26 W., Frontier County, Hydrologic Unit 10250008, near right bank in control house at outlet tube of Medicine Creek Dam on Medicine Creek, 7 mi northwest of Cambridge.

DRAINAGE AREA.--880 mi², approximately, of which about 640 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--August 1949 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Aug. 18, 1960, nonrecording gage at present datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began Aug. 8, 1949. Capacity, 32,230 acre-ft between elevation 2,335.0 ft, sill of outlet gates, and 2,366.1 ft, top of storage pool and crest of slot in spillway. Top of flood-control pool and crest of main spillway at elevation 2,386.2 ft, capacity, 89,310 acre-ft. Top of superstorage flood-control pool at elevation 2,400.0 ft, capacity, 147,400 acre-ft. Maximum water-surface elevation, 2,408.9 ft, 196,000 acre-ft. Dead storage, 4,910 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,750 acre-ft Mar. 23, 1960, elevation, 2,374.10 ft; minimum since operation of reservoir began, 7,840 acre-ft Sept. 7, 1978, elevation, 2,340.39 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 41,650 acre-ft July 5, elevation, 2,368.43 ft; minimum, 20,040 acre-ft Sept. 11, elevation, 2,354.56 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

2,350	15,250	2,365	35,140
2,355	20,550	2,370	44,890
2,360	27,100		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22130	24080	26530	29460	32440	36250	39000	40580	39660	39860	33570	21950
2	22190	24150	26670	29500	32650	36250	39370	40600	39590	39860	33200	21580
3	22250	24250	26770	29550	32770	36430	39450	40740	39590	39840	32940	21290
4	22290	24320	26840	29640	32900	36480	39450	40740	39610	41160	32750	20960
5	22280	24450	27040	29740	32990	36550	39450	40740	39720	41650	32470	20680
6	22340	24500	27130	29840	33130	36570	39550	40920	39610	41530	32050	20430
7	22400	24610	27110	29940	33270	36790	39640	41020	39410	41450	31620	20240
8	22420	24780	27290	30030	33370	36750	39640	41020	39470	41490	31280	20160
9	22470	24830	27440	30150	33490	36820	39640	40900	39260	41330	30800	20190
10	22590	24880	27530	30270	33630	37080	39660	40940	39300	41240	30440	20140
11	22640	24970	27590	30400	33770	37010	39860	40880	39370	41240	30060	20040
12	22690	25080	27690	30510	33900	37080	39880	40920	39470	41000	29720	20180
13	22730	25190	27810	30570	34010	37340	39920	40780	39940	40620	29320	20180
14	22830	25270	27880	30720	34150	37420	39900	40620	40050	40410	28860	20130
15	22890	25330	27960	30800	34320	37500	39900	40530	40110	40270	28390	20130
16	22930	25390	28020	30870	34360	37480	39880	40450	40270	40150	27840	20200
17	22990	25480	28080	30950	34570	37630	39880	40370	40270	39900	27350	20380
18	23080	25600	28120	31060	34810	37910	39880	40370	40330	39570	26820	20480
19	23170	25720	28240	31090	34860	38150	39880	40580	40390	39450	26350	20560
20	23200	25790	28390	31190	34950	38280	40130	40580	40390	39060	25820	20530
21	23260	25860	28460	31280	35090	38380	40290	40580	40370	38660	25460	20590
22	23360	25940	28550	31380	35230	38400	40330	40470	40330	38360	25120	20590
23	23450	25990	28670	31490	35410	38490	40620	40350	40110	37890	24850	20710
24	23530	26050	28700	31550	35500	38550	40640	40330	40070	37290	24660	20620
25	23570	26180	28800	31700	35630	38570	40780	40150	40090	36810	24520	20620
26	23650	26300	28930	31760	35700	38640	40760	39940	40110	36140	24370	20680
27	23740	26390	29060	31850	35890	38740	40540	40090	40050	35760	24080	20750
28	23790	26460	29090	31980	35920	38870	40530	39820	40130	35340	23730	20750
29	23820	26450	29170	32120	36030	38950	40620	39800	40130	34840	23260	20810
30	23890	26450	29270	32200	---	38950	40600	39820	40040	34500	22760	20870
31	23990	---	29370	32350	---	38970	---	39860	---	34040	22350	---
MAX	23990	26460	29370	32350	36030	38970	40780	41020	40390	41650	33570	21950
MIN	22130	24080	26530	29460	32440	36250	39000	39800	39260	34040	22350	20040
(†)	2357.75	2359.54	2361.51	2363.37	2365.49	2367.07	2367.91	2367.53	2367.62	2364.37	2356.48	2355.27
(††)	+1990	+2460	+2920	+2980	+3680	+2940	+1630	-740	+180	-6000	-11690	-1480

CAL YR 1983 MAX 40600 MIN 21290 (††) -7130
WTR YR 1984 MAX 41650 MIN 20040 (††) -1130

(†) Elevation, in feet, at end of month.
(††) Change in contents, in acre-feet.

06842500 MEDICINE CREEK BELOW HARRY STRUNK LAKE, NE

LOCATION.--Lat 40°22'20", long 100°13'20", at center of sec.25, T.5 N., R.26 W., Frontier County, Hydrologic Unit 10250008, on right bank 0.5 mi downstream from Medicine Creek Dam and 6.5 mi northwest of Cambridge.

DRAINAGE AREA.--880 mi^2, approximately, of which about 640 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1950, published as "below Medicine Creek Dam." Monthly discharge only for some periods, published in WSP 1730.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Concrete control since August 1950. Datum of gage is 2,295.26 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Apr. 24, 1950, nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.--Records good except those below 1.0 ft^3/s, which are fair. Flow regulated by Harry Strunk Lake (station 06842000).

AVERAGE DISCHARGE.--35 years, 61.5 ft^3/s, 44,600 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft^3/s Mar. 23, 1960, gage height, 5.97 ft; minimum daily, 0.10 ft^3/s Nov. 13, 1952, Sept. 19, 1963, Sept. 27-29, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 297 ft^3/s July 25, gage height, 2.89 ft; minimum daily, 0.73 ft^3/s Dec. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	1.1	.98	.74	.98	1.4	38	86	61	67	233	210
2	.98	1.1	1.1	.74	.97	1.4	45	87	57	65	214	195
3	1.1	1.2	.98	.74	.87	1.5	48	89	56	77	173	176
4	1.2	3.1	.86	.74	.87	1.4	47	91	56	100	155	183
5	1.1	1.6	.86	.74	.87	1.3	48	91	55	129	165	158
6	1.2	1.9	.86	.74	.90	1.2	50	92	56	135	213	135
7	1.1	3.0	.80	.74	.91	1.3	53	96	54	131	236	84
8	1.2	1.3	.80	.74	1.0	1.3	53	96	52	125	212	53
9	1.1	1.3	.74	.74	1.2	1.4	53	93	53	118	215	56
10	1.2	1.2	.74	.74	.98	1.3	55	90	51	114	204	51
11	1.4	1.2	.74	.74	.98	1.4	56	89	52	114	192	29
12	1.2	1.2	.73	.74	.96	1.4	52	85	52	112	194	9.7
13	1.1	1.2	.74	.74	.98	1.4	48	81	60	105	224	.78
14	1.2	1.2	.74	.74	.98	3.3	45	78	65	101	242	.78
15	1.6	1.2	.74	.74	1.0	3.9	43	77	67	118	264	.80
16	1.6	1.2	.80	.74	1.0	4.1	42	75	72	159	293	.83
17	1.4	1.2	.80	.74	1.0	5.1	42	75	76	166	266	.82
18	1.4	1.3	.80	.75	1.1	8.1	43	76	77	197	246	.81
19	1.6	1.2	.80	.80	.99	11	42	77	77	218	256	.84
20	1.6	1.3	.80	.95	.98	12	46	76	77	206	280	.82
21	1.6	1.3	.80	.95	1.0	23	54	76	76	195	267	.81
22	1.4	1.3	.80	.97	1.0	26	55	76	76	209	203	.83
23	1.4	1.6	.80	.94	1.0	27	56	73	76	254	136	.85
24	1.2	1.4	.80	.95	1.1	29	58	72	71	283	108	.82
25	1.2	1.4	.77	.94	1.3	30	59	71	68	297	108	.80
26	1.2	1.2	.74	.95	1.2	33	56	68	69	293	111	.80
27	1.0	1.1	.74	.98	1.2	36	78	67	68	254	151	.88
28	1.1	1.2	.74	.96	1.2	37	87	66	72	232	198	.88
29	6.0	1.4	.74	.98	1.3	35	88	63	71	230	224	.93
30	1.2	1.8	.75	.98	---	36	86	61	69	230	232	.93
31	1.1	---	.74	.98	---	37	---	61	---	233	218	---
TOTAL	43.48	42.7	24.83	25.66	29.82	414.2	1626	2454	1942	5267	6433	1354.71
MEAN	1.40	1.42	.80	.83	1.03	13.4	54.2	79.2	64.7	170	208	45.2
MAX	6.0	3.1	1.1	.98	1.3	37	88	96	77	297	293	210
MIN	.80	1.1	.73	.74	.87	1.2	38	61	51	65	108	.78
AC-FT	86	85	49	51	59	822	3230	4870	3850	10450	12760	2690

CAL YR 1983 TOTAL 19887.98 MEAN 54.5 MAX 237 MIN .59 AC-FT 39450
WTR YR 1984 TOTAL 19657.40 MEAN 53.7 MAX 297 MIN .73 AC-FT 38990

06843500 REPUBLICAN RIVER AT CAMBRIDGE, NE

LOCATION.--Lat 40°17'05", long 100°08'35", in NW1/4SE1/4 sec.28, T.4 N., R.25 W., Furnas County, Hydrologic Unit 10250004, on left bank 400 ft south of U.S. Highways 6 and 34, 0.5 mi downstream from Medicine Creek, 1 mi east of Cambridge, and 1.3 mi upstream from Cambridge diversion dam.

DRAINAGE AREA.--14,520 mi², approximately, of which about 7,810 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--September 1945 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,239.07 ft National Geodetic Vertical Datum of 1929. Prior to July 13, 1948, nonrecording gage at site 150 ft upstream at same datum and July 13, 1948, to Sept. 25, 1950, at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station and since 1949 by regulation from upstream reservoirs.

AVERAGE DISCHARGE.--35 years (water years 1950-84, since storage in Harry Strunk Lake), 277 ft³/s, 200,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 160,000 ft³/s June 22, 1947, gage height, 16.7 ft, from floodmarks, from rating curve extended above 12,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.07 ft³/s Sept. 27, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1826, 17.6 ft May 31 to June 1, 1935, from information by local resident, discharge, about 280,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 957 ft³/s June 18, gage height, 5.78 ft; minimum daily, 16 ft³/s Sept. 22.

REVISIONS.--The maximum discharge for the water year 1983 has been revised to 2,220 ft³/s June 13, 1983, gage height, 7.65 ft, superseding figure published in report for 1983.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	80	66	90	200	205	217	418	287	252	289	220
2	56	80	76	98	260	203	253	379	263	245	288	224
3	58	81	82	98	255	203	306	380	252	219	266	201
4	61	81	86	90	245	203	308	382	248	328	246	206
5	61	84	80	96	240	198	294	368	244	675	234	181
6	62	85	76	110	235	192	276	396	231	478	258	153
7	61	86	78	108	250	191	261	466	224	418	290	118
8	63	91	86	106	270	187	252	435	216	364	287	105
9	66	96	100	104	290	184	254	509	221	331	243	107
10	68	97	94	106	274	183	257	590	221	291	253	106
11	65	98	96	110	242	184	255	577	232	267	237	97
12	65	98	98	106	222	183	246	556	254	247	235	95
13	66	100	94	80	206	184	231	540	246	226	244	119
14	69	99	86	84	200	183	222	542	250	210	260	89
15	69	101	90	88	195	180	213	544	324	203	267	74
16	65	101	88	86	199	178	212	536	328	262	286	53
17	66	104	90	90	198	183	212	541	317	272	284	39
18	69	107	68	70	210	180	210	616	725	288	260	37
19	68	108	70	68	207	170	210	594	624	318	262	34
20	72	105	60	80	189	250	226	541	417	294	283	28
21	71	105	56	78	185	241	375	513	360	258	314	23
22	73	104	54	100	199	241	471	514	347	238	289	16
23	73	103	60	94	205	242	406	444	330	261	224	17
24	73	106	66	120	210	250	381	409	308	284	173	23
25	70	107	64	130	209	267	335	407	288	302	161	24
26	70	100	76	145	217	274	311	405	274	310	154	28
27	70	94	106	140	212	258	292	389	267	298	155	31
28	70	86	94	145	203	241	296	378	275	276	201	32
29	69	84	76	155	202	227	326	368	270	276	220	34
30	74	72	78	145	---	218	405	355	258	273	228	36
31	78	---	82	170	---	218	---	344	---	273	219	---
TOTAL	2083	2843	2476	3290	6429	6501	8513	14436	9101	9237	7610	2550
MEAN	67.2	94.8	79.9	106	222	210	284	466	303	298	245	85.0
MAX	78	108	106	170	290	274	471	616	725	675	314	224
MIN	56	72	54	68	185	170	210	344	216	203	154	16
AC-FT	4130	5640	4910	6530	12750	12890	16890	28630	18050	18320	15090	5060

CAL YR 1983 TOTAL 94377 MEAN 259 MAX 1370 MIN 48 AC-FT 187200
WTR YR 1984 TOTAL 75069 MEAN 205 MAX 725 MIN 16 AC-FT 148900

06844000 MUDDY CREEK AT ARAPAHOE, NE

LOCATION.--Lat 40°18'20", long 99°54'40", in NW1/4NW1/4 sec.22, T.4 N., R.23 W., Furnas County, Hydrologic Unit 10250009, on left bank 10 ft upstream from bridge on U.S. Highways 6 and 34, 0.2 mi west of Arapahoe, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--246 mi^2.

PERIOD OF RECORD.--December 1950 to September 1972, and October 1977 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,143.92 ft, National Geodetic Vertical Datum of 1929. December 1950 to Jan. 11, 1951, nonrecording gage, and Jan. 12, 1951, to Sept. 30, 1972, recording gage at site on left bank 20 ft downstream from bridge at present datum.

REMARKS.--Records good except those for winter period, which are fair. Natural flow affected by irrigation development above station and return flow from irrigated areas.

AVERAGE DISCHARGE.--28 years (1951-72, 1978-84), 14.4 ft^3/s, 10,430 acre-ft/yr; median of yearly mean discharges, 11 ft^3/s, 8,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,280 ft^3/s June 16, 1957, gage height, 24.62 ft; no flow Aug. 26 to Sept. 2, 1953, July 23, 29, Aug. 4, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 31 ft occurred June 22, 1947, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 335 ft^3/s July 4 at 2400, gage height, 8.18 ft from floodmark; no peak above base of 750 ft^3/s; minimum daily, 2.9 ft^3/s Dec. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	7.1	2.9	5.8	7.2	7.7	8.9	11	8.9	8.0	13	6.6
2	15	6.9	4.0	5.8	7.2	7.3	12	11	8.8	8.8	13	6.6
3	8.2	6.9	4.8	5.8	7.4	7.5	15	12	8.7	8.8	21	7.2
4	7.0	6.9	5.0	5.8	6.6	7.6	13	11	9.5	115	12	7.4
5	6.9	6.9	5.8	5.8	6.5	7.5	10	11	9.1	173	12	7.6
6	6.7	7.2	5.6	5.5	10	7.1	9.5	19	8.5	37	12	7.4
7	6.3	8.9	6.0	5.8	9.0	7.3	9.4	57	8.2	18	13	7.5
8	6.1	9.2	6.5	8.2	9.1	7.0	8.9	28	8.2	14	14	7.4
9	6.1	7.8	6.4	6.1	9.0	6.8	8.5	15	8.8	13	13	7.1
10	6.6	7.2	6.1	5.3	8.8	6.6	8.7	11	8.7	15	10	6.9
11	6.6	6.5	6.1	5.3	9.4	7.4	9.1	9.4	9.0	19	9.7	5.8
12	6.4	6.4	6.1	5.8	9.2	7.6	8.9	9.0	10	16	9.1	5.7
13	6.4	6.1	6.0	5.6	9.2	7.6	8.5	8.7	9.8	14	8.8	6.7
14	6.3	6.1	5.7	5.4	9.0	8.0	8.2	8.5	9.1	14	8.3	5.6
15	6.2	6.1	5.6	5.2	9.1	8.5	8.3	8.5	8.5	13	9.1	5.3
16	6.4	6.2	5.4	5.0	9.2	8.9	8.2	8.4	8.7	12	9.0	5.3
17	7.0	6.3	5.2	5.4	8.9	9.0	8.4	10	9.0	12	11	5.5
18	6.7	6.5	5.6	4.0	8.7	8.8	8.4	14	9.1	12	11	5.3
19	6.9	6.8	6.0	4.2	9.3	8.4	8.4	11	12	12	9.7	5.3
20	6.9	7.3	6.0	4.7	8.0	10	10	10	13	12	9.8	5.0
21	6.9	6.6	5.8	4.5	7.6	10	30	9.2	10	12	13	5.0
22	6.9	6.6	5.2	6.8	8.2	11	19	11	9.2	12	8.9	4.8
23	6.7	6.5	5.4	7.6	8.4	10	27	10	8.2	12	8.4	5.1
24	6.4	6.0	5.8	7.9	7.9	9.7	18	9.2	8.1	13	9.1	4.9
25	6.1	5.9	5.6	7.4	7.9	9.5	12	9.1	7.5	12	9.4	5.0
26	6.2	6.4	5.8	6.7	7.9	9.8	9.9	9.2	14	14	8.6	5.0
27	6.3	5.4	6.6	6.4	7.9	10	9.2	9.1	22	16	8.5	5.2
28	6.4	3.3	6.2	6.5	7.2	9.5	8.4	8.9	11	16	9.3	5.0
29	6.6	3.2	5.6	6.9	7.4	9.2	10	8.9	9.0	16	8.4	4.9
30	6.4	3.0	5.4	8.4	---	9.1	12	8.8	8.3	16	8.5	5.1
31	6.8	---	5.8	7.4	---	8.9	---	8.6	---	13	8.4	---
TOTAL	228.4	192.2	174.0	187.0	241.2	263.3	345.8	385.5	292.9	698.6	329.0	177.2
MEAN	7.37	6.41	5.61	6.03	8.32	8.49	11.5	12.4	9.76	22.5	10.6	5.91
MAX	22	9.2	6.6	8.4	10	11	30	57	22	173	21	7.6
MIN	6.1	3.0	2.9	4.0	6.5	6.6	8.2	8.4	7.5	8.0	8.3	4.8
AC-FT	453	381	345	371	478	522	686	765	581	1390	653	351

CAL YR 1983 TOTAL 4199.7 MEAN 11.5 MAX 404 MIN 2.9 AC-FT 8330
WTR YR 1984 TOTAL 3515.1 MEAN 9.60 MAX 173 MIN 2.9 AC-FT 6970

KANSAS RIVER BASIN

06844210 TURKEY CREEK AT EDISON, NE

LOCATION.--Lat 40°16'15", long 99°44'00", in the center of sec.31, T.4 N., R.21 W., Furnas County, Hydrologic Unit 10250009, on left bank 10 ft downstream from bridge on State Highway 136, 2 mi east of Edison and 5 mi upstream from mouth.

DRAINAGE AREA.--74.9 mi².

PERIOD OF RECORD.--October 1977 to current year.

REVISED RECORDS.--WDR NE-81-1: 1978-80(M).

GAGE.--Water-stage recorder. Altitude of gage is 2,090 ft, from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Natural flow affected by pump irrigation development above station and by return flow from irrigated areas.

AVERAGE DISCHARGE.--7 years, 5.69 ft³/s, 4,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 940 ft³/s July 18, 1981, gage height, 11.95 ft, from floodmark; minimum daily, 0.74 ft³/s Sept. 9, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37 ft³/s July 6, gage height, 4.06 ft; minimum daily, 1.9 ft³/s Dec. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.8	3.8	5.6	12	8.4	8.0	13	8.2	5.9	4.2	3.8
2	3.4	4.8	6.2	5.6	11	9.1	11	11	8.2	6.5	4.8	3.8
3	3.3	4.6	5.9	5.4	9.8	9.2	13	13	7.9	6.6	5.0	3.8
4	3.6	4.7	6.0	5.6	9.1	9.0	11	12	8.1	9.1	5.4	3.8
5	3.8	5.1	6.0	6.0	9.1	9.0	9.4	10	8.5	19	5.6	3.8
6	3.7	4.7	6.0	6.2	7.6	8.9	9.2	12	8.2	14	5.3	3.8
7	3.6	4.7	5.5	6.0	6.9	8.7	8.8	16	8.0	7.8	4.4	3.1
8	3.7	4.5	5.5	5.6	8.3	8.0	8.8	10	8.0	7.6	4.3	2.4
9	3.8	4.7	5.1	5.2	8.1	7.6	8.7	9.3	8.1	8.0	3.9	2.0
10	3.9	5.1	4.9	5.4	8.2	7.8	8.7	9.4	8.1	8.2	4.3	2.0
11	3.9	3.9	4.9	5.6	8.1	8.2	8.8	9.3	8.1	12	5.5	2.0
12	3.7	2.6	5.1	5.6	8.2	8.5	9.0	9.2	8.4	8.3	5.6	2.1
13	3.9	2.9	5.1	5.2	9.2	8.7	8.5	9.1	8.3	6.7	5.4	2.2
14	4.1	4.1	5.1	4.5	7.6	8.5	7.8	8.9	7.8	6.7	4.5	2.1
15	4.2	4.8	5.1	4.2	7.6	8.4	8.1	8.9	7.6	6.8	4.4	2.3
16	4.1	4.5	3.5	3.8	7.2	8.2	8.1	9.0	7.5	7.0	2.5	2.4
17	4.1	4.5	3.0	4.0	7.0	8.1	8.1	9.1	7.8	6.2	2.0	2.4
18	4.1	4.5	2.6	3.5	6.8	6.7	8.0	11	7.4	6.3	2.3	2.4
19	4.1	4.5	2.5	3.3	5.2	5.2	8.1	16	7.3	7.0	3.1	2.4
20	4.5	4.6	2.6	3.8	5.0	7.9	8.5	12	7.3	7.0	4.5	2.3
21	5.1	4.7	2.1	3.6	4.8	11	20	9.8	7.3	6.2	6.0	2.3
22	5.0	4.7	1.9	4.6	6.6	9.0	21	17	7.2	6.0	5.8	2.2
23	5.1	4.5	2.4	4.4	8.0	8.6	11	11	7.3	6.0	4.2	2.2
24	5.1	4.0	2.5	5.6	9.0	8.2	9.9	8.6	7.7	6.8	4.3	2.4
25	4.9	3.8	2.7	6.4	8.9	8.4	9.9	8.2	6.9	4.7	4.1	2.5
26	5.0	4.0	2.8	6.9	8.4	9.1	9.4	8.4	6.8	4.5	3.8	2.6
27	5.3	3.1	4.5	6.5	8.0	9.4	9.4	8.5	6.6	4.3	4.7	2.6
28	5.2	2.1	4.0	8.0	7.2	8.5	8.9	8.3	6.3	4.6	3.8	2.6
29	5.1	3.5	3.5	9.0	6.4	8.1	10	8.1	6.0	4.7	3.6	2.5
30	4.7	4.0	3.6	11	---	8.0	13	8.0	5.9	5.5	2.9	2.4
31	4.9	---	4.5	18	---	8.1	---	8.0	---	5.4	3.1	---
TOTAL	133.4	127.0	128.9	184.1	229.3	260.5	302.1	322.1	226.8	225.4	133.3	79.2
MEAN	4.30	4.23	4.16	5.94	7.91	8.40	10.1	10.4	7.56	7.27	4.30	2.64
MAX	5.3	5.1	6.2	18	12	11	21	17	8.5	19	6.0	3.8
MIN	3.3	2.1	1.9	3.3	4.8	5.2	7.8	8.0	5.9	4.3	2.0	2.0
AC-FT	265	252	256	365	455	517	599	639	450	447	264	157

CAL YR 1983	TOTAL	2622.4	MEAN	7.18	MAX	310	MIN	1.9	AC-FT	5200
WTR YR 1984	TOTAL	2352.1	MEAN	6.43	MAX	21	MIN	1.9	AC-FT	4670

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE

LOCATION.--Lat 40°07'53", long 99°30'08", in NE1/4NE1/4 sec.19, T.2 N., R.19 W., Harlan County, Hydrologic Unit 10250009, on right bank 18 ft downstream from bridge on State Highway 89, 200 ft downstream from Burlington Northern Inc. bridge, 2 mi west of Orleans, 2.8 mi upstream from Sappa Creek, and 23 mi upstream from Harlan County Dam.

DRAINAGE AREA.--15,640 mi^2, approximately, of which about 8,910 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,972.57 ft National Geodetic Vertical Datum of 1929. Prior to June 2, 1948, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station and regulation by upstream reservoirs.

AVERAGE DISCHARGE.--37 years, 298 ft^3/s, 215,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,600 ft^3/s June 22, 1948, gage height, 11.25 ft, from rating curve extended above 29,000 ft^3/s; maximum gage height, 12.60 ft Mar. 22, 1960, backwater from ice; no flow at times in 1952-57, 1963, 1978-80.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred June 1, 1935. Flood of June 23, 1947, reached a stage of 14.00 ft, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 968 ft^3/s May 19, gage height, 5.03 ft; minimum daily, 8.1 ft^3/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	102	84	145	260	248	280	585	418	212	58	16
2	88	102	96	160	320	250	324	596	395	213	52	16
3	92	105	110	160	310	245	414	613	356	200	53	23
4	77	103	120	150	300	244	472	589	342	191	57	29
5	74	103	130	160	295	238	464	573	337	286	57	31
6	68	103	125	170	290	234	442	604	323	611	50	32
7	64	104	125	165	295	232	422	710	309	462	44	27
8	61	105	135	160	330	232	401	708	292	371	44	25
9	62	109	150	165	370	232	391	671	288	312	43	26
10	64	115	145	170	340	232	385	636	279	278	46	23
11	66	116	150	175	325	230	383	708	283	239	39	23
12	66	118	150	170	315	231	383	708	289	184	39	28
13	66	117	145	140	303	220	371	692	292	151	38	29
14	67	116	135	145	275	219	356	673	298	128	35	22
15	71	116	135	150	257	217	337	674	286	112	31	27
16	74	115	140	145	251	212	323	664	309	101	27	29
17	73	117	145	155	246	218	316	661	348	95	24	30
18	78	118	130	130	268	220	313	796	335	92	26	29
19	81	120	135	125	256	215	315	863	471	80	27	25
20	71	122	120	135	245	205	323	821	685	73	29	18
21	79	122	116	130	235	250	494	722	494	80	31	10
22	83	126	110	160	240	290	701	661	428	80	40	8.1
23	82	125	114	155	247	278	741	667	398	72	58	8.4
24	84	123	120	180	255	284	642	616	368	57	67	8.4
25	83	125	125	190	261	292	578	538	340	64	61	8.8
26	88	116	145	200	264	319	539	505	318	61	48	9.7
27	88	106	170	195	259	336	495	493	288	56	36	15
28	86	96	155	200	252	332	454	477	251	56	29	17
29	86	94	135	210	250	309	472	458	228	62	22	20
30	91	88	140	205	---	291	533	446	224	62	21	23
31	95	---	145	230	---	286	---	430	---	63	20	---
TOTAL	2425	3347	4080	5130	8114	7841	13064	19558	10272	5104	1252	636.4
MEAN	78.2	112	132	165	280	253	435	631	342	165	40.4	21.2
MAX	117	126	170	230	370	336	741	863	685	611	67	32
MIN	61	88	84	125	235	205	280	430	224	56	20	8.1
AC-FT	4810	6640	8090	10180	16090	15550	25910	38790	20370	10120	2480	1260

CAL YR 1983 TOTAL 107738 MEAN 295 MAX 3280 MIN 32 AC-FT 213700
WTR YR 1984 TOTAL 80823.4 MEAN 221 MAX 863 MIN 8.1 AC-FT 160300

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)
OCT										
04...	1000	76	650	8.6	16.0	7.1	--	4400	5500	--
18...	1330	78	725	8.6	14.5	7.2	18	--	--	290
NOV										
08...	0945	118	760	8.3	14.5	7.4	22	300	1000	290
16...	1400	116	710	7.7	6.5	11.7	--	--	--	--
DEC										
07...	1045	98	835	7.3	1.0	7.8	20	200	1800	340
15...	1330	140	880	7.6	.0	6.9	--	--	--	--
JAN										
10...	1130	169	715	7.9	.5	5.8	30	380	K60000	280
FEB										
07...	1215	297	715	8.2	.0	12.7	25	200	K56000	260
MAR										
12...	1445	223	--	8.2	4.0	11.0	24	540	6100	300
APR										
05...	1430	462	810	8.2	10.0	8.1	33	110	8600	280
MAY										
08...	1100	698	745	7.6	12.0	7.7	65	4200	7800	260
JUN										
13...	1030	280	775	8.1	22.5	7.5	34	230	260	280
JUL										
10...	1015	279	560	8.0	27.0	6.9	58	1700	1000	210
18...	1215	107	625	8.3	26.0	10.3	--	--	--	--
AUG										
07...	1100	44	--	8.0	27.5	8.2	300	340	280	230
21...	1345	31	630	8.2	25.0	8.0	--	--	--	--
SEP										
04...	0945	27	640	8.2	17.5	8.0	70	K3400	2100	230
12...	1345	23	620	--	26.0	9.5	--	--	--	--

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)
OCT										
04...	--	--	--	--	--	--	--	--	--	--
18...	78	24	85	25	59	1.6	.030	1.2	1.2	2.8
NOV										
08...	77	24	80	24	62	1.5	.060	1.3	1.4	2.9
16...	--	--	--	--	--	--	--	--	--	--
DEC										
07...	91	27	92	29	17	2.9	.060	.84	.90	3.8
15...	--	--	--	--	--	--	--	--	--	--
JAN										
10...	74	23	53	26	8	2.7	.220	.48	.70	3.4
FEB										
07...	70	21	77	23	84	2.4	.100	.70	.80	3.2
MAR										
12...	81	23	88	23	89	2.5	.090	.81	.90	3.4
APR										
05...	75	27	100	25	258	2.0	.040	1.3	1.3	3.3
MAY										
08...	69	22	93	25	566	1.7	.070	2.9	3.0	4.7
JUN										
13...	72	24	99	23	143	1.8	.040	1.5	1.5	3.3
JUL										
10...	56	18	53	14	482	1.3	.010	3.5	3.5	4.8
18...	--	--	--	--	--	--	--	--	--	--
AUG										
07...	54	24	84	14	41	.40	.070	1.2	1.3	1.7
21...	--	--	--	--	--	--	--	--	--	--
SEP										
04...	56	22	69	17	10	.30	.020	1.2	1.2	1.5
12...	--	--	--	--	--	--	--	--	--	--

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
OCT									
04...	--	--	--	--	--	--	--	--	--
18...	.300	--	--	--	--	--	--	--	36
NOV									
08...	.280	10	<100	<1	<10	5	2300	2200	53
16...	--	--	--	--	--	--	--	--	--
DEC									
07...	.200	--	--	--	--	--	--	--	6
15...	--	--	--	--	--	--	--	--	--
JAN									
10...	.270	--	--	--	--	--	--	--	15
FEB									
07...	.250	8	100	<1	<10	3	2100	2100	29
MAR									
12...	.250	--	--	--	--	--	--	--	15
APR									
05...	.430	--	--	--	--	--	--	--	34
MAY									
08...	.350	8	300	<1	20	21	17000	17000	64
JUN									
13...	.330	--	--	--	--	--	--	--	5
JUL									
10...	.650	--	--	--	--	--	--	--	18
18...	--	--	--	--	--	--	--	--	--
AUG									
07...	.170	8	200	<1	<10	4	1400	--	7
21...	--	--	--	--	--	--	--	--	--
SEP									
04...	.220	--	--	--	--	--	--	--	11
12...	--	--	--	--	--	--	--	--	--

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT									
04...	--	--	--	--	--	--	--	--	--
18...	--	--	--	4	--	--	--	--	4.6
NOV									
08...	4	120	120	4	.1	3	1	20	5.4
16...	--	--	--	--	--	--	--	--	--
DEC									
07...	--	--	--	8	--	--	--	--	1.1
15...	--	--	--	--	--	--	--	--	--
JAN									
10...	--	--	--	5	--	--	--	--	4.2
FEB									
07...	6	120	120	5	.1	4	<1	50	6.1
MAR									
12...	--	--	--	4	--	--	--	--	4.8
APR									
05...	--	--	--	8	--	--	--	--	11
MAY									
08...	4	490	490	2	.1	3	<1	80	16
JUN									
13...	--	--	--	2	--	--	--	--	10
JUL									
10...	--	--	--	2	--	--	--	--	14
18...	--	--	--	--	--	--	--	--	--
AUG									
07...	<1	120	--	11	.1	2	1	20	7.9
21...	--	--	--	--	--	--	--	--	--
SEP									
04...	--	--	--	21	--	--	--	--	3.8
12...	--	--	--	--	--	--	--	--	--

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
OCT 18...	1330	8	48	1	16	286	.70
NOV 08...	0945	2	46	1	16	290	.80
DEC 07...	1045	24	52	1	16	315	.70
JAN 10...	1130	5	44	1	16	275	.70
FEB 07...	1215	0	41	1	16	263	.70
MAR 12...	1445	3	44	1	15	294	.80
APR 05...	1430	16	47	1	17	266	.70
MAY 08...	1100	0	46	1	18	266	.70
JUN 13...	1030	21	48	1	17	258	.80
JUL 10...	1015	5	35	1	17	209	.80
AUG 07...	1100	11	43	1	19	223	.70
SEP 04...	0945	0	38	1	18	234	.60

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	BORON, DIS-SOLVED (UG/L AS B) (01020)
OCT 18...	39	490	.66	103	1.5	.200	160
NOV 08...	41	480	.66	154	1.4	.180	140
DEC 07...	44	540	.74	143	2.8	.170	150
JAN 10...	40	470	.64	215	2.7	.220	130
FEB 07...	37	440	.60	356	2.1	.140	120
MAR 12...	42	490	.67	297	2.4	.100	130
APR 05...	34	480	.65	600	1.9	.180	120
MAY 08...	34	470	.64	881	1.4	.220	110
JUN 13...	31	470	.64	355	1.5	.120	130
JUL 10...	27	360	.48	268	1.2	.190	110
AUG 07...	35	410	.56	49	.35	.010	120
SEP 04...	30	390	.53	29	.37	.080	130

06846500 BEAVER CREEK AT CEDAR BLUFFS, KS

LOCATION.--Lat 39°59'06", long 100°33'35", in NW1/4NE1/4 sec.10, T.1 S., R.29 W., Decatur County, Hydrologic Unit 10250014, on right bank at downstream side of bridge on U.S. Highway 83, 0.2 mi north of Cedar Bluffs, 1.0 mi south of Kansas-Nebraska State line, and at mi 107.4.

DRAINAGE AREA.--1,618 mi², of which 294 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1510: 1947, 1950-51.

GAGE.--Water-stage recorder. Datum of gage is 2,520.33 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 19, 1971, at site 0.1 mi upstream at same datum. Aug. 19, 1971, to July 12, 1972, at site 0.8 mi downstream at datum 5.00 ft lower.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--39 years, 17.4 ft³/s, 12,610 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,940 ft³/s June 11, 1960, gage height, 18.71 ft at site 0.1 mi upstream at same datum; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1944 reached a stage of 18.16 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39 ft³/s June 20, gage height, 5.32 ft, no peak above base of 300 ft³/s; no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	7.2	3.5	1.1	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	7.2	3.4	.95	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	7.7	3.2	.87	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	8.8	2.9	.91	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	9.2	2.8	.82	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	10	2.6	.75	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	13	2.4	.60	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	11	2.1	.52	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	9.6	2.0	.45	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	9.5	1.9	.38	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	10	1.8	.30	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	10	1.7	.23	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	9.7	1.6	.17	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	9.0	1.5	.12	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	8.7	1.4	.05	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	8.4	1.3	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	8.0	1.2	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	8.0	1.2	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	7.8	19	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	7.9	24	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	7.0	15	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	6.6	7.1	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	6.5	4.6	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.72	6.3	3.2	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	3.3	5.4	2.4	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	4.5	4.9	2.1	.00	.00	.00
27	.00	.01	.00	.00	.00	.00	4.5	4.2	1.8	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	4.1	4.2	1.6	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	4.9	3.9	1.4	.00	.00	.00
30	.00	.00	.00	.00	---	.00	5.6	3.7	1.2	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	3.6	---	.00	.00	---
TOTAL	.00	.01	.00	.00	.00	.00	27.62	237.0	121.9	8.22	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.92	7.65	4.06	.27	.000	.000
MAX	.00	.01	.00	.00	.00	.00	5.6	13	24	1.1	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	3.6	1.2	.00	.00	.00
AC-FT	.00	.02	.00	.00	.00	.00	55	470	242	16	.00	.00

CAL YR 1983 TOTAL 3165.64 MEAN 8.67 MAX 1080 MIN .00 AC-FT 6280
WTR YR 1984 TOTAL 394.75 MEAN 1.08 MAX 24 MIN .00 AC-FT 783

06847000 BEAVER CREEK NEAR BEAVER CITY, NE

LOCATION.--Lat 40°07'12", long 99°53'35", in SW1/4SW1/4 sec.23, T.2 N., R.23 W., Furnas County, Hydrologic Unit 10250014, on left bank 400 ft downstream from bridge on U.S. Highway 283, 3.5 mi west of Beaver City, and at mi 24.7.

DRAINAGE AREA.--1,950 mi^2, approximately, of which about 1,650 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1340: 1937-38(M), 1939, 1940-41(M), 1943(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,162.96 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 13, 1947, nonrecording gages and Aug. 13, 1947, to Nov. 14, 1957, water-stage recorder, at site 400 ft upstream at datum 2.0 ft higher. Nov. 15, 1957, to Sept. 22, 1958, at site 3.6 mi upstream at different datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--48 years, 23.5 ft^3/s, 17,030 acre-ft/yr; median of yearly mean discharges, 13 ft^3/s, 9,420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,510 ft^3/s June 14, 1983, gage height, 15.68 ft; no flow at times in 1937-40, 1946, 1953-57, 1959, 1969-74, 1976, 1978-81.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14 ft^3/s Apr. 21, gage height, 3.46 ft; no peak above base of 400 ft^3/s; minimum daily discharge, 0.12 ft^3/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.59	.71	.76	.87	1.8	1.9	2.7	9.7	5.3	1.8	.76	.47
2	.56	.74	.80	.87	1.7	2.0	4.8	10	5.1	1.8	.77	.53
3	.53	.74	.79	.88	1.6	2.0	8.5	9.7	4.8	1.6	.73	.52
4	.59	.74	.77	.87	1.5	2.0	5.7	9.4	4.9	1.9	.70	.53
5	.59	.72	.80	.91	1.5	2.0	4.6	8.9	4.7	2.0	.72	.42
6	.59	.72	.81	.93	1.5	1.9	5.6	10	4.7	1.8	.68	.30
7	.62	.74	.79	.92	1.6	2.0	5.4	9.8	4.5	1.7	.78	.30
8	.59	.82	.79	.92	1.7	2.0	5.3	11	4.4	1.6	.70	.37
9	.68	1.3	.83	.92	1.7	2.0	5.0	10	4.2	1.5	.63	.42
10	.72	.92	.83	.92	1.7	2.0	4.9	9.9	4.3	1.3	.62	.30
11	.76	.84	.83	.92	1.9	2.0	4.7	8.4	4.3	1.4	.62	.23
12	.76	.81	.84	.91	2.0	2.0	4.5	8.0	4.2	1.4	.62	.20
13	.79	.74	.85	.89	1.9	2.0	4.2	7.6	4.1	1.2	.62	.13
14	.79	.68	.86	.86	2.0	2.0	4.2	7.4	3.7	1.2	.57	.13
15	.76	.67	.84	.90	2.0	2.0	4.0	7.1	3.5	1.2	.55	.14
16	.76	.68	.79	.91	2.0	2.0	3.9	6.9	3.5	1.1	.56	.14
17	.83	.75	.77	.91	1.9	2.0	3.9	6.9	3.2	1.1	.56	.14
18	.85	.91	.78	.80	2.0	1.9	3.9	8.9	3.2	1.1	.55	.18
19	.85	.94	.78	.70	2.0	1.9	3.8	9.8	3.3	1.0	.55	.19
20	.82	.85	.80	.70	2.0	2.2	4.3	9.5	3.2	1.2	.53	.25
21	.83	.78	.83	.70	2.0	2.4	11	7.7	3.0	.97	.55	.22
22	.76	.77	.83	.80	1.9	2.5	11	7.1	2.7	.92	.54	.17
23	.74	.79	.83	.80	2.0	2.6	12	6.8	2.7	.88	.54	.12
24	.71	.77	.85	.80	2.0	2.8	11	6.5	2.5	.88	.52	.16
25	.79	.97	.86	.80	1.9	3.5	9.4	6.5	2.6	.82	.50	.20
26	1.1	.96	.87	.90	2.0	3.1	8.9	6.5	2.4	.82	.50	.20
27	.78	.87	.87	.90	1.9	3.2	8.6	6.1	2.1	.83	.49	.23
28	.71	.58	.87	1.0	1.8	2.8	7.9	6.0	2.3	.81	.49	.25
29	.71	.81	.87	1.0	1.9	2.8	8.4	5.9	2.0	.78	.47	.25
30	.73	.71	.89	1.1	---	2.7	10	5.7	1.8	.74	.48	.27
31	.72	---	.90	1.4	---	2.7	---	5.5	---	.76	.47	---
TOTAL	22.61	24.03	25.58	27.71	53.4	70.9	192.1	248.2	107.2	38.11	18.37	7.96
MEAN	.73	.80	.83	.89	1.84	2.29	6.40	8.01	3.57	1.23	.59	.27
MAX	1.1	1.3	.90	1.4	2.0	3.5	12	11	5.3	2.0	.78	.53
MIN	.53	.58	.76	.70	1.5	1.9	2.7	5.5	1.8	.74	.47	.12
AC-FT	45	48	51	55	106	141	381	492	213	76	36	16

CAL YR 1983 TOTAL 11498.50 MEAN 31.5 MAX 5130 MIN .10 AC-FT 22810
WTR YR 1984 TOTAL 836.17 MEAN 2.28 MAX 12 MIN .12 AC-FT 1660

06847500 SAPPA CREEK NEAR STAMFORD, NE

LOCATION.--Lat 40°07'53", long 99°33'15", in NW1/4NW1/4 sec.23, T.2 N., R.20 W., Harlan County, Hydrologic Unit 10250011, on left bank 40 ft south of Burlington Northern Inc. track, 500 ft downstream from bridge on county highway, 2 mi east of Stamford, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--3,740 mi^2, approximately, of which about 3,280 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1919: 1960. WSP 2119: Drainage area. WDR NE-71-1: Calendar year totals. WRD NE-82-1: 1979(M).

GAGE.--Water-stage recorder. Datum of gage is 1,981.31 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--39 years, 56.1 ft^3/s, 40,640 acre-ft/yr; median of yearly mean discharges, 35 ft^3/s, 25,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,400 ft^3/s June 24, 1966, gage height, 22.13 ft, from floodmark, from contracted opening and flow-over-road measurement of peak flow; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 151 ft^3/s May 20, gage height, 6.10 ft, no peak above base of 1,000 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	.00	.00	.00	.76	12	12	43	29	12	.74	.00
2	.15	.00	.00	.00	1.4	11	19	49	27	12	.52	.00
3	.00	.00	.00	.00	2.6	8.8	25	60	26	11	.40	.00
4	.00	.00	.00	.00	5.0	9.5	23	50	26	11	.30	.00
5	.00	.00	.00	.00	3.8	11	29	45	26	10	.25	.00
6	.19	.00	.00	.00	2.8	9.3	29	54	26	8.0	.22	.00
7	.23	.00	.00	.00	2.6	9.6	24	78	25	7.7	.28	.00
8	.07	.00	.00	.00	2.8	8.8	21	60	24	8.4	.18	.00
9	.00	.00	.00	.00	3.3	9.9	19	56	24	6.7	.23	.00
10	.00	.00	.00	.00	7.8	11	21	48	23	6.3	.25	.00
11	.00	.00	.00	.00	9.0	9.2	19	44	23	11	.14	.00
12	.00	.00	.00	.00	7.3	14	18	40	24	8.4	.10	.00
13	.00	.00	.00	.00	11	8.0	16	37	23	7.8	.09	.00
14	.00	.00	.00	.00	10	8.1	16	34	22	5.9	.04	.00
15	.00	.00	.00	.00	11	9.3	15	32	21	4.4	.00	.00
16	.00	.00	.00	.00	11	7.4	14	30	20	4.0	.00	.00
17	.00	.00	.00	.00	9.0	8.3	13	31	21	3.4	.00	.00
18	.00	.00	.00	.00	6.3	9.3	13	53	21	2.7	.00	.00
19	.00	.00	.00	.00	12	8.1	13	108	19	3.9	.00	.00
20	.00	.00	.00	.00	12	12	14	111	19	3.8	.00	.00
21	.00	.00	.00	.00	11	14	57	81	18	4.0	.00	.00
22	.00	.00	.00	.00	11	15	62	51	17	3.3	.00	.00
23	.00	.00	.00	.00	8.9	10	86	43	16	1.2	.00	.00
24	.00	.00	.00	.00	8.9	13	74	43	16	.99	.00	.00
25	.00	.00	.00	.00	10	13	59	38	15	.91	.00	.00
26	.00	.00	.00	.00	9.3	15	49	37	16	1.0	.00	.00
27	.00	.00	.00	.00	8.0	17	41	39	14	.81	.00	.00
28	.00	.00	.00	1.0	12	16	37	36	15	1.1	.00	.00
29	.00	.00	.00	6.7	13	14	41	34	14	1.2	.00	.00
30	.00	.00	.00	2.2	---	13	48	32	12	.83	.00	.00
31	.00	---	.00	.97	---	12	---	31	---	.83	.00	---
TOTAL	1.09	.00	.00	10.87	223.56	346.6	927	1528	622	164.57	3.74	.00
MEAN	.03	.00	.00	.35	7.71	11.2	30.9	49.3	20.7	5.31	.12	.00
MAX	.45	.00	.00	6.7	13	17	86	111	29	12	.74	.00
MIN	.00	.00	.00	.00	.76	7.4	12	30	12	.81	.00	.00
AC-FT	2.2	.00	.00	22	443	687	1840	3030	1230	326	7.4	.00

CAL YR 1983 TOTAL 13575.60 MEAN 37.2 MAX 2450 MIN .00 AC-FT 26930
WTR YR 1984 TOTAL 3827.43 MEAN 10.5 MAX 111 MIN .00 AC-FT 7590

KANSAS RIVER BASIN

06848500 PRAIRIE DOG CREEK NEAR WOODRUFF, KS

LOCATION.--Lat 39°59'09", long 99°28'39", in NW1/4NW1/4 sec.9, T.1 S., R.19 W., Phillips County, Hydrologic Unit 10250015, on left bank at downstream side of bridge on U.S. Highway 383, 1 mi south of Kansas-Nebraska State line, 2.5 mi west of Woodruff, and at mi 26.5.

DRAINAGE AREA.--1,007 mi².

PERIOD OF RECORD.--October 1928 to September 1932, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,016.20 ft National Geodetic Vertical Datum of 1929. See WSP 1919 for history of changes prior to Oct. 7, 1955.

REMARKS.--Records poor. Flow regulated to some extent since 1964 by Keith Sebelius Lake 48.4 mi upstream and by irrigation development above station.

AVERAGE DISCHARGE.--44 years (water years 1929-32, 1945-84), 33.9 ft³/s, 24,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s June 23, 1947, gage height, 21.04 ft, site and datum then in use, from rating curve extended above 6,500 ft³/s on basis of contracted-opening measurement of 11,300 ft³/s; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge observed, 13.8 ft³/s result of discharge measurement, May 3, gage height, 5.46 ft; but may have been greater during period of backwater, Apr. 1 to May 2; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.00	.00	.00	.00	.00	19	18	.00	.00	.00	.00
2	.06	.00	.00	.00	.02	.00	30	16	.00	.00	.00	.00
3	.01	.00	.00	.00	.15	.00	15	14	.00	.00	.00	.00
4	.01	.00	.00	.00	.22	.00	11	13	.00	.00	.00	.00
5	.00	.00	.00	.00	.11	.00	8.0	14	.00	.00	.00	.00
6	.00	.00	.00	.00	.04	.00	7.0	15	.00	.00	.00	.00
7	.00	.00	.00	.00	.02	.00	6.5	13	.00	.00	.00	.00
8	.00	.00	.00	.00	.01	.00	6.0	12	.00	.00	.00	.00
9	.00	.00	.00	.00	.01	.00	5.8	11	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	5.6	11	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	5.4	10	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	5.2	10	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	5.0	7.0	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	4.7	4.0	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	4.5	2.0	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	4.5	2.5	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	4.5	1.8	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	4.5	1.3	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	5.0	1.1	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	12	1.3	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	20	1.5	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	14	2.5	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	12	2.9	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.01	9.0	1.5	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.01	8.5	.81	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.07	7.6	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.07	7.2	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.18	8.0	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.16	10	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	2.9	18	.00	.00	.00	.00	.00
31	.00	---	.00	.06	---	11	---	.00	---	.00	.00	---
TOTAL	.28	.00	.00	.06	.58	14.40	283.5	187.21	.00	.00	.00	.00
MEAN	.009	.000	.000	.002	.020	.46	9.45	6.04	.000	.000	.000	.000
MAX	.20	.00	.00	.06	.22	11	30	18	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	4.5	.00	.00	.00	.00	.00
AC-FT	.6	.00	.00	.1	1.2	29	562	371	.00	.00	.00	.00

CAL YR 1983 TOTAL 1562.31 MEAN 4.28 MAX 737 MIN .00 AC-FT 3100
WTR YR 1984 TOTAL 486.03 MEAN 1.33 MAX 30 MIN .00 AC-FT 964

06849000 HARLAN COUNTY LAKE NEAR REPUBLICAN CITY, NE

LOCATION.--Lat 40°04'10", long 99°12'30", in sec.11, T.1 N., R.17 W., Harlan County, Hydrologic Unit 10250009, at left end of spillway on upstream side of Harlan County Dam on Republican River, 2 mi southeast of Republican City and 8 mi southeast of Alma.

DRAINAGE AREA.--20,750 mi², approximately, of which about 13,530 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--November 1952 to current year. Prior to October 1965 published as Harlan County Reservoir near Republican City.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam with gravity-type concrete spillway section; storage began Nov. 14, 1952. Capacity, 327,600 acre-ft between elevations 1,885.0 ft, sill of outlet gates, and 1,946.0 ft, top of storage pool. Top of flood-control pool at elevation 1,973.5 ft, capacity, 825,800 acre-ft. Top of superstorage flood-control pool at elevation 1,975.5 ft, capacity, 872,700 acre-ft. Figures given herein represent total contents. Water used for irrigation is the Bostwick irrigation project.

COOPERATION.--Capacity table furnished by Corps of Engineers (revised Jan. 1, 1982).

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 497,700 acre-ft Apr. 6, 1960, elevation, 1,955.67 ft; minimum since operation of reservoir began, 110,300 acre-ft Oct. 22 to Nov. 5, 1953, elevation, 1,922.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 342,800 acre-ft May 23, elevation, 1,947.12 ft; minimum, 225,700 acre-ft Sept. 30, elevation, 1,937.21 ft.

Capacity table, (elevation, in feet, and contents, in acre-feet)

1,935	203,900	1,945	314,600
1,940	255,200	1,950	383,900

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	251600	253100	258800	262900	270600	286900	306800	336000	337800	338200	288700	236100
2	252000	253300	258800	263000	270900	287100	309100	336700	337800	337100	286600	234800
3	251900	253600	259000	263400	271400	288500	310800	337600	337300	336000	284500	233600
4	252200	253600	259000	263500	271900	289000	311800	338000	337500	335000	282400	232300
5	252000	253300	259100	263600	272400	289400	312700	338400	337600	333700	280600	231400
6	252100	253400	259200	263800	272600	289700	313000	339400	337500	332700	278500	231000
7	252000	254100	259400	264000	273300	290800	314800	339500	337300	332100	277000	230000
8	251800	254700	259600	264200	273600	290700	315500	339500	336400	331400	274900	229700
9	251800	254700	259500	264400	274200	291200	316400	339400	336800	330000	273100	229000
10	252000	254700	259700	264600	275000	291700	317200	339300	336100	329400	270800	228500
11	252000	254700	259800	264900	275900	291900	319400	339300	336300	328000	268900	228700
12	252000	255000	260000	265200	276600	292900	319600	339100	336100	326300	266700	228700
13	251400	255300	260100	265400	277300	293200	320300	339000	336000	324700	264600	228500
14	251500	255500	260500	265900	277700	293800	320800	338700	335800	323000	262400	228300
15	251900	255500	260500	266200	278600	294100	321300	338300	335800	321600	260600	228300
16	251800	255600	260600	266400	278900	294800	321700	338200	336000	320100	258700	228000
17	251600	255800	260800	266800	279300	295000	322400	339300	336400	318700	256600	228000
18	252000	256100	261000	267000	281200	297100	322800	340200	336500	316500	254900	228000
19	252500	256700	261100	267200	281400	297500	323200	340900	336700	315100	253200	228000
20	252300	256600	261500	267300	281900	297700	325400	341200	337600	313000	251100	227800
21	252400	256700	261600	267600	282400	298400	327900	341600	338000	311300	250200	227400
22	252500	256900	261700	267800	283100	299600	329400	342300	340500	309400	248900	227300
23	252500	257100	262000	267900	283400	299800	331000	342800	340400	307500	247400	227400
24	252500	257100	261900	268000	283800	300600	331700	342700	340500	305600	246100	227000
25	252600	257200	262000	268300	284000	301100	332500	341600	340800	303600	245100	226500
26	252600	256900	262100	268500	285100	302800	332700	340400	341000	301700	244100	226200
27	252600	259200	262300	268700	285600	303700	333300	340400	340900	299700	243100	226200
28	252500	258900	262500	269100	285800	304100	332700	338700	340600	297400	241800	225900
29	252600	258900	262500	269300	286300	305000	334900	337800	339900	294900	240300	225900
30	252700	258800	262500	269600	---	305600	335000	337500	339000	292900	238800	225700
31	252800	---	262800	270100	---	306300	---	337800	---	291100	237300	---
MAX	252800	259200	262800	270100	286300	306300	335000	342800	341000	338200	288700	236100
MIN	,251400	253100	258800	262900	270600	286900	306800	336000	335800	291100	237300	225700
(†)	1939.78	1940.32	1940.68	1941.32	1942.71	1944.35	1946.55	1946.75	1946.84	1943.11	1938.33	1937.21
(††)	+1500	+6000	+4000	+7300	+16200	+20000	+28700	+2800	+1200	-47900	-53800	-11600

CAL YR 1983	MAX	368300	MIN	246900	(††)	-48300
WTR YR 1984	MAX	342800	MIN	225700	(††)	-25600

(†) Elevation, in feet, at end of month.
(††) Change in contents, in acre-feet.

AVAILABLE

06849500 REPUBLICAN RIVER BELOW HARLAN COUNTY DAM, NE

LOCATION.--Lat 40°04'45", long 99°10'05", in SW1/4 sec.6, T.1 N., R.16 W., Franklin County, Hydrologic Unit 10250016, on left bank 1.4 mi west of Naponee, 1.4 mi upstream from Turkey Creek, and 2.8 mi downstream from Harlan County Dam.

DRAINAGE AREA.--20,760 mi², approximately, of which about 13,550 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--December 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,863.38 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good. Flow completely regulated by Harlan County Lake (station 06849000) and partially regulated by six upstream reservoirs.

AVERAGE DISCHARGE.--31 years (1953-84), 259 ft³/s, 187,600 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,320 ft³/s June 25, 1957, gage height, 8.65 ft; minimum daily, 1.5 ft³/s Apr. 28, 29, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred June 1, 1935, discharge, about 260,000 ft³/s, from slope-area measurement near Bloomington.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 984 ft³/s May 27, gage height, 3.80 ft; minimum daily, 3.2 ft³/s Nov. 5-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	4.4	5.0	16	20	6.4	6.8	429	440	351	802	378
2	7.2	4.1	8.0	17	16	6.6	31	430	440	372	802	359
3	6.0	4.3	9.0	16	14	7.0	36	422	440	410	802	304
4	7.2	3.7	9.0	18	13	8.3	13	509	438	424	802	255
5	7.1	3.2	12	20	12	7.6	9.9	585	437	423	802	214
6	6.6	3.2	11	19	14	6.7	9.4	597	436	414	792	158
7	6.6	3.2	13	17	13	6.3	8.8	657	430	436	770	112
8	6.1	4.7	13	15	12	5.5	8.7	786	425	443	770	77
9	6.2	6.0	12	12	12	6.2	9.3	798	421	463	770	76
10	6.3	4.9	13	11	13	5.8	9.3	798	421	477	765	53
11	6.2	4.1	11	11	13	6.2	9.6	799	422	480	760	17
12	6.6	4.1	9.8	11	12	6.0	10	808	420	475	760	15
13	5.4	4.1	9.8	10	11	5.4	10	802	409	482	734	14
14	4.7	4.1	9.0	11	11	5.4	11	807	399	490	713	13
15	4.7	4.1	9.0	13	10	4.9	11	786	310	497	708	12
16	4.1	4.1	9.0	12	12	5.1	12	786	225	505	678	11
17	5.1	4.1	9.3	12	13	5.9	12	791	224	508	653	10
18	8.2	4.1	9.3	10	15	6.0	12	801	221	540	644	9.6
19	6.4	5.6	9.3	8.0	14	5.8	12	819	222	568	644	9.0
20	5.1	4.8	9.3	9.0	13	5.4	17	791	223	576	644	8.4
21	5.0	4.3	9.5	10	13	6.4	67	779	224	599	548	7.8
22	4.1	5.6	9.9	12	12	8.4	37	267	230	618	430	7.2
23	3.7	6.7	9.9	14	13	8.0	134	489	230	654	356	6.8
24	3.9	4.8	9.6	15	13	7.4	396	967	226	683	320	6.4
25	4.6	4.8	9.3	17	14	6.8	404	976	224	683	317	6.0
26	3.7	4.6	15	18	14	13	406	976	223	718	313	5.6
27	3.7	4.3	18	19	14	14	410	980	223	749	325	5.4
28	3.6	5.0	16	21	11	8.5	408	981	222	776	371	5.2
29	3.7	4.7	15	22	8.0	8.1	439	739	270	808	385	4.9
30	3.6	4.5	13	24	---	6.9	456	472	330	808	381	4.7
31	3.3	---	14	25	---	7.2	---	440	---	802	381	---
TOTAL	167.9	134.2	339.0	465.0	375.0	217.2	3415.8	22067	9805	17232	18942	2165.0
MEAN	5.42	4.47	10.9	15.0	12.9	7.01	114	712	327	556	611	72.2
MAX	9.2	6.7	18	25	20	14	456	981	440	808	802	378
MIN	3.3	3.2	5.0	8.0	8.0	4.9	6.8	267	221	351	313	4.7
AC-FT	333	266	672	922	744	431	6780	43770	19450	34180	37570	4290

CAL YR 1983 TOTAL 128584.5 MEAN 352 MAX 1670 MIN 3.2 AC-FT 255000
WTR YR 1984 TOTAL 75325.1 MEAN 206 MAX 981 MIN 3.2 AC-FT 149400

06851000 CENTER CREEK AT FRANKLIN, NE

LOCATION.--Lat 40°06'12", long 98°58'45", in NW1/4NE1/4 sec.35, T.2 N., R.15 W., Franklin County, Hydrologic Unit 10250016, on right bank at downstream side of bridge on State Highway 136, 1 mi northwest of Franklin and 3 mi upstream from mouth.

DRAINAGE AREA.--177 mi^2 (revised), approximately, of which about 56 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--April 1948 to September 1956. Annual maximums and occasional low-flow measurements, water years 1961-68. October 1968 to September 1975, October 1977 to current year.

REVISED RECORDS.--WSP 2119: 1963(M), 1965(M), drainage area. WRD NE-83: 1981-82(P).

GAGE.--Water-stage recorder. Datum of gage is 1,858.34 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Dec. 19, 1952, nonrecording gage at site 1.5 mi downstream at datum 30.27 ft lower and Dec. 19, 1952, to Sept. 30, 1956, at present site at datum 0.84 ft higher. Sept. 7, 1961, to Sept. 30, 1968, crest-stage gage and Oct. 1, 1968, to Sept. 30, 1975, recording gage at present site and datum.

REMARKS.--Records fair except those for winter period, which are poor. Two small diversions above station for irrigation.

AVERAGE DISCHARGE.--22 years (1948-56, 1968-75, 1978-84) 7.95 ft^3/s, 5,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,150 ft^3/s Sept. 20, 1950, gage height, 6.8 ft, from floodmark, site and datum then in use, from rating curve extended above 420 ft^3/s on basis of slope-area measurement of peak flow; no flow at times during 1948-50.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 3	0415	154	2.28	Apr. 29	1300	106	2.00
Apr. 21	1115	287	3.03	May 19	2000	*472	4.42

Minimum daily discharge, 3.0 ft^3/s Dec. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	8.1	4.5	7.4	18	9.3	7.1	21	4.9	5.3	3.5	6.5
2	4.4	7.9	5.5	7.4	20	8.4	35	13	5.0	6.0	3.5	5.7
3	6.1	7.3	5.5	7.4	17	9.1	122	12	5.2	5.4	3.8	4.9
4	7.9	6.2	6.1	7.4	15	9.6	46	14	4.9	6.0	4.6	4.7
5	8.4	6.1	6.1	7.4	10	8.3	17	15	5.1	6.2	4.6	5.1
6	9.2	6.1	6.5	7.4	6.8	7.8	8.0	26	5.3	5.2	4.0	4.9
7	9.6	6.1	6.7	7.4	6.7	7.7	6.7	77	5.3	4.1	4.4	5.1
8	9.6	6.7	6.5	7.4	8.1	8.0	7.4	16	5.5	4.5	4.3	5.8
9	9.6	7.4	6.1	7.4	9.1	7.7	7.4	11	5.9	4.6	4.5	5.6
10	9.2	7.2	6.1	6.9	9.5	8.3	7.6	12	6.5	3.5	4.0	5.1
11	8.8	6.7	5.6	6.1	9.5	8.4	8.0	13	6.7	3.9	3.8	5.0
12	8.8	6.7	5.5	6.1	9.3	8.4	8.0	14	6.5	5.1	3.9	4.8
13	8.8	6.7	5.2	5.4	8.7	8.3	8.6	14	6.5	4.6	4.0	5.0
14	8.8	6.7	5.2	5.6	8.4	8.4	9.4	14	6.6	4.5	3.9	4.8
15	8.6	6.7	5.5	5.8	8.4	7.9	10	15	6.5	4.0	4.5	4.8
16	8.1	6.7	5.0	6.0	8.7	7.1	10	15	6.7	4.1	4.3	5.0
17	8.1	6.6	5.2	6.4	7.6	6.0	10	16	6.8	5.2	4.0	4.7
18	8.1	6.1	3.9	5.2	7.9	5.7	10	18	6.8	5.6	4.1	4.5
19	8.7	12	3.5	5.0	7.9	12	11	206	6.7	4.5	4.3	4.7
20	7.4	4.5	3.8	6.2	8.3	8.0	22	96	6.7	4.3	4.3	4.7
21	7.4	4.5	3.3	6.0	8.6	7.1	196	4.0	6.9	4.2	4.2	5.0
22	6.8	4.5	3.0	8.0	9.3	6.0	97	5.7	6.8	4.0	4.3	4.9
23	6.7	4.0	3.5	10	9.3	5.7	10	3.3	6.5	4.3	4.9	5.1
24	6.7	4.2	3.3	10	9.3	5.4	6.7	3.2	6.5	3.9	4.3	5.1
25	7.4	4.8	3.4	11	9.4	5.4	7.2	3.4	6.0	4.0	4.7	5.4
26	8.1	5.0	5.2	11	9.3	6.0	7.6	3.9	5.3	4.6	5.1	6.2
27	8.1	4.5	9.0	11	9.5	16	8.0	4.3	4.7	4.9	4.9	6.1
28	8.1	4.0	8.0	15	9.8	9.8	8.6	4.5	3.6	3.6	4.7	5.6
29	8.1	3.5	6.4	18	9.8	8.4	40	4.5	4.1	3.5	5.0	5.6
30	8.1	3.3	6.0	17	---	8.4	67	4.7	4.4	3.6	4.3	6.4
31	8.1	---	6.8	16	---	7.1	---	4.8	---	3.3	4.5	---
TOTAL	260.8	180.8	165.9	264.3	289.2	249.7	819.3	684.3	174.9	140.5	133.2	156.8
MEAN	8.41	6.03	5.35	8.53	9.97	8.05	27.3	22.1	5.83	4.53	4.30	5.23
MAX	19	12	9.0	18	20	16	196	206	6.9	6.2	5.1	6.5
MIN	4.4	3.3	3.0	5.0	6.7	5.4	6.7	3.2	3.6	3.3	3.5	4.5
AC-FT	517	359	329	524	574	495	1630	1360	347	279	264	311

CAL YR 1983 TOTAL 3413.9 MEAN 9.35 MAX 501 MIN 2.5 AC-FT 6770
WTR YR 1984 TOTAL 3519.7 MEAN 9.62 MAX 206 MIN 3.0 AC-FT 6980

06851500 THOMPSON CREEK AT RIVERTON, NE

LOCATION.--Lat 40°05'21", long 98°45'38", in NW1/4NW1/4 sec.2, T.1 N., R.13 W., Franklin County, Hydrologic Unit 10250016, on left bank at downstream side of (revised) bridge on State Highway 136, at west edge of Riverton, 240 ft upstream from Burlington Northern Inc. bridge, and 0.5 mi upstream from mouth. Non-recording gage only, Oct. 1 to Mar. 29 at Burlington Northern bridge at same datum.

DRAINAGE AREA.--279 mi^2, of which about 190 mi^2 contributes directly to surface runoff.

PERIOD OF RECORD.--April 1948 to September 1956, October 1968 to September 1975. Annual maximums, water years 1962-68 and occasional low-flow measurements, water years 1961-68. October 1977 to current year.

REVISED RECORDS.--WRD Nebr. 1972: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,753.38 ft National Geodetic Vertical Datum of 1929. Apr. 1 to Oct. 1, 1948, nonrecording gage 240 ft downstream at datum 2.32 ft higher. Oct. 1, 1948, to July 11, 1950, water-stage recorder at present site at datum 1.32 ft higher, July 12, 1950, to Sept. 30, 1956, and Oct. 1, 1968, to Sept. 30, 1975, at present site and datum. Sept. 7, 1961, to Sept. 30, 1968, crest-stage gage at present site and datum. Non-recording gage only, June 27, 1983 to Mar. 29, 1984 at site 240 ft downstream at present datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--22 years (1948-56, 1968-75, 1978-84), 31.5 ft^3/s, 22,800 acre-ft/yr; median of yearly mean discharges, 30 ft^3/s, 20,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft^3/s July 9, 1950, gage height, 13.22 ft, present datum, by slope-area measurement; minimum daily, 8.1 ft^3/s Dec. 19, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 3	0100	474	5.79	May 6	2300	420	5.92
Apr. 21	----	1200	unknown	May 18	2200	775	6.95
May 2	2300	392	5.83	June 12	2400	*1770	9.26

Minimum daily discharge, 11 ft^3/s Aug. 14-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	22	25	21	67	25	32	163	29	24	15	33
2	40	22	22	22	65	25	232	145	29	25	15	51
3	34	22	24	21	56	25	378	196	29	27	15	26
4	31	25	24	21	37	28	166	57	31	36	29	26
5	28	24	24	23	32	26	76	32	30	24	47	19
6	27	23	24	23	29	25	55	104	29	24	42	14
7	26	22	22	25	28	25	45	294	28	24	22	14
8	24	23	24	25	28	25	39	90	27	23	15	14
9	24	24	24	26	29	24	33	41	30	22	13	14
10	23	23	23	24	28	24	32	28	28	22	13	14
11	23	24	23	24	27	24	40	25	31	21	14	26
12	23	24	23	24	26	25	40	23	220	21	22	16
13	23	23	24	23	26	24	34	23	211	20	28	15
14	23	23	24	23	27	24	33	23	59	21	11	14
15	22	23	24	22	26	24	29	23	41	28	11	15
16	22	22	24	23	26	25	30	23	40	39	11	15
17	22	23	23	22	26	26	28	89	34	39	12	15
18	22	23	23	24	27	27	28	384	27	23	14	15
19	24	27	21	22	26	31	28	476	25	32	16	14
20	23	26	20	21	26	30	32	191	25	32	14	14
21	22	25	21	22	26	28	885	117	26	35	17	14
22	22	24	20	22	26	29	399	126	27	39	14	15
23	22	24	22	25	26	29	107	54	26	34	15	16
24	22	23	20	23	26	30	40	39	25	28	14	15
25	22	23	21	24	26	30	27	33	25	17	14	15
26	21	24	22	24	27	51	23	33	27	16	13	15
27	22	22	22	28	25	46	20	33	26	19	14	16
28	22	21	21	34	25	40	20	30	35	16	14	16
29	22	23	20	84	25	33	31	30	24	16	15	15
30	22	27	19	73	---	33	86	30	25	17	14	15
31	22	---	20	69	---	32	---	31	---	15	15	---
TOTAL	786	704	693	887	894	893	3046	2986	1269	789	538	536
MEAN	25.4	23.5	22.4	28.6	30.8	28.8	102	96.3	42.3	25.5	17.4	17.9
MAX	61	27	25	84	67	51	885	476	220	39	47	51
MIN	21	21	19	21	25	24	20	23	24	15	11	14
AC-FT	1560	1400	1370	1760	1770	1770	6050	5920	2520	1560	1070	1060

CAL YR 1983	TOTAL	13799	MEAN	37.8	MAX	2630	MIN	12	AC-FT	27370
WTR YR 1984	TOTAL	14023	MEAN	38.3	MAX	885	MIN	11	AC-FT	27810

KANSAS RIVER BASIN

06852000 ELM CREEK AT AMBOY, NE

LOCATION.--Lat 40°05'20", long 98°26'07", in NE1/4NW1/4 sec.3, T.1 N., R.10 W., Webster County, Hydrologic Unit 10250016, on left bank at downstream side of bridge on State Highway 136 at east edge of Amboy, 2.5 mi upstream from mouth, and 4.5 mi east of Red Cloud.

DRAINAGE AREA.--39.2 mi^2.

PERIOD OF RECORD.--April 1948 to December 1953. Annual maximums, water years 1959, 1961-77 and occasional low flow measurements, water years 1954-77. October 1977 to current year.

REVISED RECORDS.--WRD NE-83: 1982(M).

GAGE.--Water-stage recorder. Datum of gage is 1,659.07 ft National Geodetic Vertical Datum of 1929. Prior to July 17, 1952, nonrecording gage at upstream side of bridge at datum 7.26 ft higher, and July 17, 1952, to Jan. 4, 1954, water-stage recorder, present site, at datum 6.26 ft higher, and Sept. 6, 1961, to Sept. 30, 1977, crest-stage gage at present site and datum.

REMARKS.--Records good. Natural flow affected by pump irrigation development above station.

AVERAGE DISCHARGE.--12 years (water years 1949-53, 1978-84), 22.3 ft^3/s, 16,160 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,800 ft^3/s Sept. 29, 1983, gage height, 16.96 ft, from floodmark, from rating curve extended above 6,400 ft^3/s on basis of velocity-area study; maximum gage height, 17.05 ft July 4, 1959; minimum daily discharge, 7.8 ft^3/s Aug. 19, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 497 ft^3/s Apr. 2, gage height, 11.93 ft; minimum daily, 9.2 ft^3/s Aug. 29, Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	17	14	15	44	17	21	38	23	17	12	9.9
2	20	17	16	14	43	16	259	28	22	17	11	13
3	18	20	15	14	30	17	184	38	21	17	11	11
4	17	18	15	14	24	19	39	30	21	27	11	11
5	17	16	15	14	18	15	27	24	21	22	11	11
6	18	16	14	15	18	16	25	27	20	17	11	11
7	18	16	15	15	18	17	24	41	20	16	12	9.2
8	18	16	15	19	17	16	24	27	20	15	13	10
9	18	16	15	28	17	17	23	23	21	13	14	11
10	18	18	15	27	17	16	24	21	20	12	12	11
11	19	17	15	25	17	16	24	20	19	12	12	11
12	19	17	15	24	17	17	25	19	19	12	12	10
13	18	17	15	22	16	17	25	18	43	11	11	12
14	18	18	16	20	16	17	24	17	19	11	9.3	11
15	18	17	16	20	16	17	23	17	18	11	10	12
16	18	16	16	20	16	17	23	17	18	13	11	12
17	18	16	16	20	16	18	23	17	19	15	11	11
18	18	17	16	19	17	18	23	18	18	13	11	12
19	18	19	16	19	16	18	23	64	17	12	11	12
20	17	18	16	19	16	19	25	57	19	13	11	12
21	17	18	15	19	16	22	218	31	18	12	12	12
22	17	17	14	18	17	26	297	31	17	12	12	12
23	17	16	16	19	17	25	51	26	17	12	12	12
24	17	15	14	18	17	24	30	25	17	11	13	12
25	17	16	15	19	17	27	27	24	17	12	13	12
26	17	17	16	21	17	46	25	24	18	13	11	12
27	17	16	16	23	17	42	24	25	17	12	11	13
28	17	16	16	90	16	26	23	24	17	12	10	13
29	17	15	15	219	16	23	120	24	16	12	9.2	13
30	17	15	15	117	---	21	197	24	16	13	9.4	13
31	17	---	15	53	---	21	---	23	---	13	9.9	---
TOTAL	580	503	473	999	559	643	1900	842	588	430	349.8	347.1
MEAN	18.7	16.8	15.3	32.2	19.3	20.7	63.3	27.2	19.6	13.9	11.3	11.6
MAX	50	20	16	219	44	46	297	64	43	27	14	13
MIN	17	15	14	14	16	15	21	17	16	11	9.2	9.2
AC-FT	1150	998	938	1980	1110	1280	3770	1670	1170	853	694	688

CAL YR 1983 TOTAL 9531.8 MEAN 26.1 MAX 2560 MIN 7.8 AC-FT 18910
WTR YR 1984 TOTAL 8213.9 MEAN 22.4 MAX 297 MIN 9.2 AC-FT 16290

06852500 COURTLAND CANAL AT NEBRASKA-KANSAS STATE LINE

LOCATION.--Lat 40°00'15", long 98°07'55", in SW1/4SE1/4 sec.32, T.1 N., R.7 W., Nuckolls County, Nebraska, Hydrologic Unit 10250016, on left bank 0.2 mi upstream from Nebraska-Kansas State line and 3.5 mi southwest of Superior, NE.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder and concrete Parshall flume. Datum of gage is 1,612.46 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Canal diverts from Republican River at Courtland diversion dam in sec.7, T.1 N., R.9 W. Water is used for irrigation in Nebraska and Kansas; figures published herein represent that portion which flows into Kansas.

AVERAGE DISCHARGE.--30 years, 78.4 ft³/s, 56,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 781 ft³/s Sept. 2, 1973, gage height, 5.05 ft; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 612 ft³/s Aug. 6; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	.00	.00	.00	.00	.00	.00	.00	.00	187	596	254
2	55	.00	.00	.00	.00	.00	.00	.00	.00	193	598	267
3	47	.00	.00	.00	.00	.00	.00	.00	.00	260	594	272
4	13	.00	.00	.00	.00	.00	.00	.00	.00	310	598	256
5	3.1	.00	.00	.00	.00	.00	.00	.00	.00	364	607	245
6	1.6	.00	.00	.00	.00	.00	.00	.00	.00	382	612	227
7	.00	.00	.00	.00	.00	.00	.00	.00	55	380	590	204
8	.00	.00	.00	.00	.00	.00	.00	.00	113	382	568	179
9	.00	.00	.00	.00	.00	.00	.00	.00	122	380	574	164
10	.00	.00	.00	.00	.00	.00	.00	.00	115	380	570	143
11	.00	.00	.00	.00	.00	.00	.00	.00	115	404	559	130
12	.00	.00	.00	.00	.00	.00	.00	.00	116	414	559	100
13	.00	.00	.00	.00	.00	.00	.00	.00	120	416	568	86
14	.00	.00	.00	.00	.00	.00	.00	.00	103	410	544	80
15	.00	.00	.00	.00	.00	.00	.00	.00	88	414	526	68
16	.00	.00	.00	.00	.00	.00	.00	.00	91	428	502	68
17	.00	.00	.00	.00	.00	.00	.00	.00	91	436	468	71
18	.00	.00	.00	.00	.00	.00	.00	.00	86	434	456	72
19	.00	.00	.00	.00	.00	.00	.00	.00	85	432	462	82
20	.00	.00	.00	.00	.00	.00	.00	.00	89	448	476	82
21	.00	.00	.00	.00	.00	.00	.00	.00	90	458	464	82
22	.00	.00	.00	.00	.00	.00	.00	.00	91	464	420	57
23	.00	.00	.00	.00	.00	.00	.00	.00	90	472	352	50
24	.00	.00	.00	.00	.00	.00	.00	.00	92	478	267	56
25	.00	.00	.00	.00	.00	.00	.00	.00	95	502	242	61
26	.00	.00	.00	.00	.00	.00	.00	.00	118	516	244	88
27	.00	.00	.00	.00	.00	.00	.00	.00	121	512	245	106
28	.00	.00	.00	.00	.00	.00	.00	.00	128	552	244	69
29	.00	.00	.00	.00	.00	.00	.00	.00	142	574	236	68
30	.00	.00	.00	.00	.00	.00	.00	.00	161	596	245	68
31	.00	---	.00	.00	---	.00	---	.00	---	605	244	---
TOTAL	191.70	.00	.00	.00	.00	.00	.00	.00	2517.00	13183	14230	3755
MEAN	6.18	.00	.00	.00	.00	.00	.00	.00	83.9	425	459	125
MAX	72	.00	.00	.00	.00	.00	.00	.00	161	605	612	272
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	187	236	50
AC-FT	380	.00	.00	.00	.00	.00	.00	.00	4990	26150	28230	7450

CAL YR 1983 TOTAL 43181.40 MEAN 118 MAX 629 MIN .00 AC-FT 85650
WTR YR 1984 TOTAL 33876.70 MEAN 92.6 MAX 612 MIN .00 AC-FT 67190

KANSAS RIVER BASIN

06853000 REPUBLICAN RIVER NEAR GUIDE ROCK, NE

LOCATION.--Lat 40°04'05", long 98°22'25", in SW1/4NE1/4 sec.7, T.1 N., R.9 W., Webster County, Hydrologic Unit 10250016, on left bank 300 ft upstream from Willow Creek, 0.2 mi downstream from Courtland diversion dam, and 2 mi southwest of Guide Rock.

DRAINAGE AREA.--22,040 mi², approximately, of which about 14,550 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1950 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,624.13 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1959, at datum 5.00 ft higher.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station, by regulation of upstream reservoirs, and since Nov. 14, 1952, by storage in Harlan County Lake (station 06849000).

AVERAGE DISCHARGE.--34 years, 338 ft³/s, 244,900 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,200 ft³/s June 16, 1957, gage height, 20.73 ft, present datum; minimum daily, 0.1 ft³/s May 26, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred June 1 or 2, 1935, discharge, about 250,000 ft³/s, from slope-area measurements near Bloomington and Hardy.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,650 ft³/s Apr. 22, gage height, 15.56 ft; minimum daily, 9.1 ft³/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1610	135	100	180	520	223	303	1500	631	192	55	50
2	623	136	120	200	470	225	940	1280	618	186	60	157
3	426	149	114	180	430	225	2090	1490	585	125	56	157
4	375	188	110	190	390	262	1120	1190	567	96	58	138
5	299	171	120	220	330	268	712	1030	497	104	74	109
6	256	154	116	210	288	247	542	1170	446	70	77	109
7	228	153	140	220	284	236	470	1540	433	56	79	82
8	210	159	165	210	268	224	430	1370	422	54	68	74
9	195	165	170	180	256	219	399	1310	477	56	59	59
10	194	168	160	165	255	222	379	1260	458	56	49	48
11	245	171	165	160	249	220	374	1220	438	56	51	54
12	185	166	160	150	245	219	407	1180	439	53	63	40
13	165	170	165	130	236	217	381	1160	944	42	59	25
14	154	174	160	140	229	222	342	1120	507	47	62	21
15	151	173	165	150	224	219	320	1110	468	56	53	21
16	141	170	120	130	217	211	307	1090	448	59	55	20
17	137	172	130	140	209	225	295	1930	349	59	42	17
18	133	173	90	110	222	246	286	1340	313	53	45	15
19	142	174	80	100	222	210	280	1830	294	59	63	13
20	151	201	90	120	219	190	283	2000	290	60	66	9.1
21	147	205	80	116	216	347	1560	1440	287	55	121	9.5
22	145	181	70	160	220	405	3080	1340	275	54	180	14
23	143	175	90	200	227	390	1480	1120	265	54	105	15
24	142	170	80	210	227	366	867	643	277	52	101	14
25	137	172	90	230	229	366	934	925	251	48	66	13
26	138	173	120	250	234	442	928	1250	230	45	66	13
27	137	136	160	270	236	573	860	1270	230	55	61	16
28	134	133	150	300	226	467	809	1260	226	62	44	12
29	132	120	120	350	222	377	1110	1230	218	57	39	9.6
30	130	110	110	400	---	333	2390	1160	191	64	36	9.3
31	132	---	150	470	---	315	---	793	---	53	35	---
TOTAL	7537	4897	3860	6241	7800	8911	24678	38651	12074	2138	2049	1343.5
MEAN	243	163	125	201	269	287	823	1247	402	69.0	66.1	44.8
MAX	1610	205	170	470	520	573	3080	2000	944	192	180	157
MIN	130	110	70	100	209	190	280	643	191	42	36	9.1
AC-FT	14950	9710	7660	12380	15470	17670	48950	76660	23950	4240	4060	2660

CAL YR 1983 TOTAL 153363 MEAN 420 MAX 8130 MIN 17 AC-FT 304200
WTR YR 1984 TOTAL 120179.5 MEAN 328 MAX 3080 MIN 9.1 AC-FT 238400

06853000 REPUBLICAN RIVER NEAR GUIDE ROCK, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1962 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT											
06...	1345	296	735	8.1	17.5	8.1	23	2500	7000	--	99
NOV											
09...	0915	166	590	--	6.5	7.8	27	520	2900	350	110
DEC											
08...	1015	168	815	7.7	.5	6.5	20	220	280	350	110
JAN											
11...	1200	210	740	7.9	.0	8.8	500	K110	K20000	320	99
FEB											
08...	1215	263	850	7.9	3.5	10.6	23	K57	K92000	380	120
MAR											
13...	1645	221	845	7.8	13.0	10.3	22	K65	660	380	120
APR											
04...	1600	1030	550	7.8	7.0	10.1	110	2300	8900	220	70
MAY											
09...	1015	1110	665	7.1	12.5	6.6	44	16000	8200	260	76
JUN											
13...	1545	1300	340	7.4	22.0	6.3	480	K66000	K110000	120	35
JUL											
10...	1815	54	625	8.1	28.5	7.9	43	400	200	250	66
AUG											
07...	1800	40	--	8.2	27.0	7.6	200	K810	220	210	51
SEP											
04...	1845	125	645	8.1	23.0	9.1	30	K300	600	220	54

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
06...	--	130	23	72	1.2	.070	1.2	1.3	2.5	.320	5.9
NOV											
09...	18	130	25	25	1.1	.070	2.0	2.1	3.2	.190	4.3
DEC											
08...	19	130	24	23	1.7	.100	.90	1.0	2.7	.150	3.6
JAN											
11...	17	120	24	72	1.8	.340	.46	.80	2.6	.260	6.0
FEB											
08...	19	140	25	61	1.5	.150	.55	.70	2.2	.240	4.6
MAR											
13...	19	160	26	44	1.4	.070	.63	.70	2.1	.130	4.2
APR											
04...	12	99	15	1170	1.0	.320	6.7	7.0	8.0	1.00	31
MAY											
09...	18	120	24	434	.80	.060	1.4	1.5	2.3	.100	13
JUN											
13...	8.1	38	9.0	6420	2.7	.430	20	20	23	3.50	160
JUL											
10...	20	98	22	149	.60	.010	.96	1.0	1.6	.250	7.3
AUG											
07...	21	94	23	81	.40	.050	.65	.70	1.1	.220	6.7
SEP											
04...	21	95	23	90	.30	.020	.98	1.0	1.3	.190	7.1

06853000 REPUBLICAN RIVER NEAR GUIDE ROCK, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
NOV										
09...	0915	83	35	.8	11	266	.40	30	520	.70
DEC										
08...	1015	--	37	.9	--	--	--	--	--	--
JAN										
11...	1200	--	32	.8	--	--	--	--	--	--
FEB										
08...	1215	90	36	.8	13	288	.40	30	560	.76
MAR										
13...	1645	--	36	.8	--	--	--	--	--	--
MAY										
09...	1015	40	39	1	14	224	.60	13	440	.60
JUN										
13...	1645	--	15	.6	--	--	--	--	--	--
AUG										
07...	1800	13	43	1	18	201	.70	7.4	380	.51
SEP										
04...	1845	--	44	1	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
NOV										
09...	232	1.1	.140	5	<100	80	<1	<10	3	1300
DEC										
08...	--	--	--	--	--	--	--	--	--	--
JAN										
11...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	395	1.5	.150	5	200	70	1	10	2	1900
MAR										
13...	--	--	--	--	--	--	--	--	--	--
MAY										
09...	1550	.74	.100	4	<100	90	<1	20	14	10000
JUN										
13...	--	--	--	--	--	--	--	--	--	--
AUG										
07...	82	.29	.090	7	100	110	<1	<10	4	2300
SEP										
04...	--	--	--	--	--	--	--	--	--	--

DATE	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV										
09...	1300	24	3	80	50	30	.4	3	3	30
DEC										
08...	--	--	--	--	--	--	--	--	--	--
JAN										
11...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	1900	12	3	110	90	20	.1	4	1	50
MAR										
13...	--	--	--	--	--	--	--	--	--	--
MAY										
09...	10000	36	2	300	300	4	.1	4	<1	90
JUN										
13...	--	--	--	--	--	--	--	--	--	--
AUG										
07...	--	4	3	130	--	2	.1	2	<1	30
SEP										
04...	--	--	--	[illegible]	[illegible]	--	--	--	--	--

KANSAS RIVER BASIN

06853500 REPUBLICAN RIVER NEAR HARDY, NE

LOCATION.--Lat 39°59'33", long 97°55'53", in NE1/4NE1/4SE1/4 sec.1, T.1 S., R.6 W., in Kansas, Republic County, Hydrologic Unit, 10250016, on right bank at upstream side of highway bridge, 1.2 mi southwest of Hardy and at mi 141.2.

DRAINAGE AREA.--22,401 mi^2, of which about 7,500 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1904 to September 1915 (no winter records), April 1931 to current year. Prior to May 1932, published as "at Bostwick." Records for June 1896 to November 1903 published as "near Superior" in 18th to 22nd Ann. Repts., inclusive, Pt. 4, and WSP 75, 84, and 99, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 806: Drainage area. WSP 1006: 1941. WSP 1340: 1905(M), 1907-9, 1912, 1914-15, 1931. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,501.46 ft National Geodetic Vertical Datum of 1929. Prior to May 19, 1932, nonrecording gage at site at Bostwick, 20 mi upstream at different datum.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station and by storage in reservoirs in Colorado, Kansas and Nebraska. Considerable regulation since 1952 by Harlan County Reservoir (see site 06849000).

AVERAGE DISCHARGE.--53 years (water years 1914, 1933-84), 568 ft^3/s, 411,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 225,000 ft^3/s June 2, 1935, gage height, 19.4 ft, based on records for stations upstream; no flow Aug. 9-19, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1895, that of June 2, 1935, and 17.00 ft June 24, 1947, discharge, 100,000 ft^3/s, based on records for upstream stations.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,400 ft^3/s Oct. 1, gage height, 13.65 ft; minimum discharge, 34 ft^3/s Sept. 21-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15000	261	192	509	1500	323	435	2600	1010	299	131	92
2	4390	256	237	509	1000	321	746	2000	939	316	115	128
3	2500	250	254	509	750	319	2550	1900	912	344	125	200
4	1400	361	231	504	600	344	2040	1700	903	310	135	279
5	710	347	228	510	500	385	1090	1550	885	292	139	263
6	620	292	216	460	425	377	834	1500	797	299	163	214
7	540	264	207	440	400	346	720	1450	779	255	171	174
8	480	250	227	400	377	323	671	1350	743	224	152	161
9	430	266	228	380	363	310	629	1300	1460	198	141	124
10	400	328	231	370	355	309	585	1340	1120	183	131	107
11	430	295	251	360	352	313	575	1290	885	169	120	87
12	480	280	243	350	348	317	597	1260	898	165	127	92
13	564	264	235	320	341	315	585	1240	898	155	140	82
14	449	261	204	310	336	319	536	1210	1380	137	130	64
15	402	253	180	290	332	319	496	1190	1230	142	111	50
16	364	241	160	280	332	311	470	1220	1140	157	102	49
17	341	237	150	280	325	316	453	1180	1100	165	87	49
18	319	235	150	290	332	335	435	1170	780	148	87	47
19	319	255	150	280	336	331	424	2100	590	134	91	43
20	316	385	155	280	330	297	425	2510	434	119	109	40
21	322	313	155	290	335	410	697	2110	435	142	195	35
22	316	292	150	320	336	553	3780	1670	429	129	261	34
23	301	266	150	320	349	557	3740	1570	412	132	294	36
24	289	255	160	290	351	524	1410	1200	399	128	236	38
25	278	249	200	320	346	508	1050	968	439	118	216	37
26	264	246	240	360	351	542	1110	1210	441	123	191	37
27	258	244	260	520	354	722	1030	1390	382	109	158	42
28	256	167	230	760	344	700	969	1400	357	121	132	46
29	258	176	330	1100	331	578	921	1350	330	163	96	45
30	261	196	472	1600	---	500	2800	1350	324	161	69	43
31	258	---	500	2000	---	456	---	1220	---	152	79	---
TOTAL	33515	7985	6976	15511	12731	12580	32803	46498	22821	5689	4434	2739
MEAN	1081	266	225	500	439	406	1093	1500	761	184	143	91.3
MAX	15000	385	500	2000	1500	722	3780	2600	1460	344	294	279
MIN	256	167	150	280	325	297	424	968	324	109	69	34
AC-FT	66480	15840	13840	30770	25250	24950	65060	92230	45270	11280	8790	5430

CAL YR 1983 TOTAL 197981 MEAN 542 MAX 15000 MIN 94 AC-FT 392700
WTR YR 1984 TOTAL 204282 MEAN 558 MAX 15000 MIN 34 AC-FT 405200

KANSAS RIVER BASIN

06879900 BIG BLUE RIVER AT SURPRISE, NE

LOCATION.--Lat 41°06'05", long 97°18'35", in NW1/4NW1/4 sec.15, T.13 N., R.1 E., Butler County, Hydrologic Unit 10270201, on left bank 50 ft downstream from bridge on county road at south edge of Surprise.

DRAINAGE AREA.--345 mi².

PERIOD OF RECORD.--April 1964 to current year. Prior to October 1965, published as North Branch Big Blue River at Surprise.

GAGE.--Water-stage recorder and concrete broad-crested weir control. Altitude of gage is 1,520 ft, from topographic map.

REMARKS.--Records good above 5 ft³/s and poor below.

AVERAGE DISCHARGE.--20 years, 27.8 ft³/s, 20,140 acre-ft/yr; median of yearly mean discharges, 25 ft³/s, 18,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s July 19, 1965, gage height, 11.52 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 3	2030	543	4.11	May 9	1030	267	3.15
Apr. 5	1400	482	3.75	May 22	0530	540	3.97
Apr. 21	2100	316	3.27	June 16	0830	*1670	7.15
Apr. 24	0900	322	3.29				

Minimum daily discharge, 0.03 ft³/s Jan. 20-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.52	1.9	.65	233	7.7	31	61	15	8.3	32	4.4
2	.23	.97	2.2	.72	338	8.5	110	59	32	8.2	34	3.4
3	.93	5.2	1.6	.75	417	8.9	313	150	13	8.2	27	2.3
4	1.8	2.8	1.5	1.2	486	83	282	182	9.8	9.0	23	1.6
5	1.2	2.4	1.4	1.2	387	46	434	154	33	8.4	23	1.4
6	.47	11	1.3	1.2	185	36	321	144	43	13	22	1.5
7	.20	9.0	.96	.91	143	35	161	213	32	11	20	1.5
8	.13	5.0	.76	.76	116	17	88	186	30	9.6	23	1.1
9	.12	7.3	.71	.73	89	26	50	245	19	9.0	25	1.0
10	.52	9.5	.47	.66	85	32	37	129	19	8.4	23	1.0
11	19	7.2	.65	.44	91	22	35	61	30	8.0	20	1.1
12	19	5.2	.51	.39	100	14	88	37	583	7.6	20	2.4
13	4.0	4.6	.47	.36	73	15	63	28	936	7.2	16	1.6
14	.89	5.0	.36	.21	54	22	116	20	1140	7.0	15	1.4
15	.52	5.0	.37	.10	54	25	73	16	1520	6.8	20	1.6
16	.35	3.3	.32	.11	43	19	40	13	1340	6.6	16	1.7
17	.25	2.8	.23	.09	31	10	27	13	353	6.6	13	2.0
18	.20	1.4	.20	.06	16	14	20	17	286	6.8	14	1.9
19	.15	1.3	.16	.11	8.7	9.3	13	91	216	8.3	18	2.0
20	.10	36	.13	.03	14	12	9.6	152	64	14	17	2.1
21	.10	27	.18	.03	15	22	168	444	41	17	20	2.2
22	.15	26	.19	.03	9.7	38	249	440	31	20	22	2.3
23	.46	22	.30	.03	8.2	78	227	160	24	26	31	2.6
24	.33	21	.27	.03	7.8	134	287	144	18	26	26	2.2
25	.75	13	.34	.03	7.4	172	137	157	20	26	22	1.4
26	.36	7.7	.28	.03	11	187	55	82	17	28	22	.98
27	.46	4.4	.12	.05	9.3	164	30	43	12	24	16	1.6
28	.15	2.2	.29	.70	7.5	105	22	53	11	26	9.0	1.7
29	.10	.90	.46	9.5	7.6	100	45	38	9.9	24	5.9	1.6
30	.30	1.2	.55	44	---	71	74	25	8.7	24	4.7	1.2
31	.32	---	.50	128	---	45	---	19	---	30	4.0	---
TOTAL	53.70	250.89	19.68	193.11	3047.2	1578.4	3605.6	3576	6906.4	443.0	603.6	54.78
MEAN	1.73	8.36	.63	6.23	105	50.9	120	115	230	14.3	19.5	1.83
MAX	19	36	2.2	128	486	187	434	444	1520	30	34	4.4
MIN	.10	.52	.12	.03	7.4	7.7	9.6	13	8.7	6.6	4.0	.98
AC-FT	107	498	39	383	6040	3130	7150	7090	13700	879	1200	109

CAL YR 1983 TOTAL 10723.96 MEAN 29.4 MAX 1310 MIN .04 AC-FT 21270
WTR YR 1984 TOTAL 20332.36 MEAN 55.6 MAX 1520 MIN .03 AC-FT 40330

06880000 LINCOLN CREEK NEAR SEWARD, NE

LOCATION.--Lat 40°54'57", long 97°08'43", in NW1/4NE1/4 sec.24, T.11 N., R.2 E., Seward County, Hydrologic Unit 10270201, on left bank at upstream (revised) side of county road, 2 mi west of Seward, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--446 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to September 1973, March 1974 to current year. Monthly discharge only for some periods, published in WSP 1730.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,429.27 ft National Geodetic Vertical Datum of 1929. Prior to June 26, 1984 on left bank 20 ft downstream from bridge at same datum.

REMARKS.--Records fair except those for winter period and for period of bridge construction June 20 to Sept. 30, which are poor. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--30 years, (1953-73, 1975-84) 48.5 ft³/s, 35,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s June 17, 1957, gage height, 20.53 ft; minimum daily, 1.3 ft³/s July 31, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 4	0730	493	10.84	Apr. 30	0330	526	10.75
Feb. 3	----	840	ice jam	May 4	2330	370	9.17
Mar. 4	1730	369	9.55	May 20	1600	769	12.54
Mar. 27	0030	444	10.28	May 22	1230	889	13.25
Apr. 3	1730	1240	14.83	June 5	1130	726	12.24
Apr. 21	2230	758	12.49	June 10	1100	389	9.36
Apr. 25	1700	463	10.15	June 16	2230	*2160	17.31

Minimum daily discharge, 11 ft³/s Oct. 2-4, Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	13	27	19	600	27	77	281	89	41	53	26
2	11	14	27	19	760	29	295	188	99	39	56	36
3	11	164	25	18	800	27	1160	286	96	38	58	28
4	11	441	23	18	720	242	938	342	83	72	60	24
5	16	174	22	17	600	212	407	327	493	140	64	22
6	23	63	20	17	380	100	374	222	251	245	64	22
7	17	38	19	15	300	71	260	232	143	200	58	22
8	14	28	18	16	250	50	200	228	103	220	56	21
9	12	121	17	16	260	55	159	184	224	120	50	20
10	12	148	17	16	260	63	112	190	349	76	50	20
11	104	78	17	16	250	51	92	197	223	59	52	20
12	51	46	16	15	225	40	114	172	522	43	56	19
13	33	31	15	15	160	35	163	122	1020	44	54	18
14	29	25	15	15	113	45	112	94	1430	41	54	17
15	20	22	15	15	106	40	83	83	1470	36	56	16
16	15	21	16	14	94	33	90	80	1700	35	54	16
17	13	20	17	14	71	28	109	93	1910	34	52	15
18	13	21	18	14	59	24	97	78	1350	34	50	14
19	14	21	16	14	34	23	78	271	544	38	48	14
20	37	33	17	14	30	23	69	701	380	42	44	13
21	16	53	15	14	31	41	462	560	180	44	58	13
22	13	39	16	15	29	141	716	829	112	46	80	13
23	13	33	17	15	31	185	519	799	86	49	110	13
24	15	34	15	15	46	180	349	646	72	46	145	13
25	14	43	14	16	71	176	443	443	66	49	155	13
26	13	36	15	16	79	272	426	269	58	50	88	11
27	13	34	18	17	57	364	212	195	54	48	58	12
28	13	31	19	20	38	191	120	170	50	54	46	12
29	13	34	19	83	29	146	215	137	46	52	40	12
30	13	35	19	290	---	137	447	112	44	50	35	12
31	13	---	18	480	---	116	---	100	---	52	31	---
TOTAL	618	1894	562	1298	6483	3167	8898	8631	13247	2136	1935	527
MEAN	19.9	63.1	18.1	41.9	224	102	297	278	442	68.9	62.4	17.6
MAX	104	441	27	480	800	354	1160	829	1910	245	155	36
MIN	11	13	14	14	29	23	69	78	44	34	31	11
AC-FT	1230	3760	1110	2570	12860	6280	17650	17120	26280	4240	3840	1050

CAL YR 1983 TOTAL 23840.4 MEAN 65.3 MAX 1670 MIN 8.7 AC-FT 47290
WTR YR 1984 TOTAL 49396 MEAN 135 MAX 1910 MIN 11 AC-FT 97980

06880000 LINCOLN CREEK NEAR SEWARD, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-70, 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT											
17...	1345	14	468	7.3	12.0	10.2	50	5400	18000	180	55
NOV											
17...	1230	20	512	7.8	5.0	13.2	29	1400	4400	220	65
DEC											
16...	1300	16	608	7.3	.0	9.2	16	240	960	270	83
JAN											
09...	1100	16	--	8.0	.0	15.0	14	K120	1500	240	74
FEB											
07...	1030	307	138	7.2	.0	12.4	68	K200	K1700	32	8.9
MAR											
06...	1315	96	265	7.4	2.0	15.2	120	1900	K30000	86	23
APR											
09...	1300	149	--	7.4	8.0	10.0	170	K380	8300	70	19
MAY											
22...	1215	359	125	7.9	18.5	6.6	310	47000	46000	27	7.3
JUN											
20...	1210	379	120	6.8	24.0	8.8	180	2600	6000	31	8.4
JUL											
17...	1235	35	525	8.0	23.5	6.4	62	K2500	20000	210	62
AUG											
13...	1300	54	568	7.4	25.0	6.9	70	1100	2200	240	68
SEP											
11...	1030	20	530	7.8	17.0	7.8	50	5500	4200	220	68

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
17...	11	33	7.2	360	2.7	.200	2.8	3.0	5.7	.740	13
NOV											
17...	13	38	6.9	97	3.5	.140	2.1	2.2	5.7	.450	6.2
DEC											
16...	16	50	9.7	37	3.7	.140	1.1	1.2	4.9	.430	3.0
JAN											
09...	14	49	9.4	15	3.3	.150	.85	1.0	4.3	.310	3.1
FEB											
07...	2.4	17	3.5	170	1.6	1.10	2.5	3.6	5.2	.920	17
MAR											
06...	6.9	33	5.8	924	<.10	1.30	3.9	5.2	--	1.30	39
APR											
09...	5.4	17	3.3	1650	2.0	.610	9.4	10	12	2.20	51
MAY											
22...	2.1	15	3.0	4300	3.1	.690	8.8	9.5	13	2.80	110
JUN											
20...	2.5	18	2.0	1990	2.7	.060	3.9	4.0	6.7	1.20	50
JUL											
17...	13	45	8.4	338	4.2	.090	2.9	3.0	7.2	.670	12
AUG											
13...	16	66	11	136	3.3	.180	2.1	2.3	5.6	.850	13
SEP											
11...	13	43	8.0	202	2.6	.140	1.8	1.9	4.5	.520	13

06880000 LINCOLN CREEK NEAR SEWARD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
OCT										
17...	1345	--	22	.7	--	--	--	--	--	--
NOV										
17...	1230	0	25	.8	9.8	218	.30	34	320	.44
FEB										
07...	1030	0	2.8	.2	12	43	.20	4.7	77	.11
MAY										
22...	1215	10	3.2	.3	10	17	.30	11	62	.08
AUG										
13...	1300	8	31	.9	12	228	.40	24	370	.50

DATE	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
OCT										
17...	--	--	--	--	--	--	--	--	--	--
NOV										
17...	17	3.5	.380	7	300	40	<1	<10	10	4300
FEB										
07...	64	1.4	.470	--	--	20	--	--	--	--
MAY										
22...	145	1.1	.320	14	1600	30	<1	90	120	120000
AUG										
13...	53	3.2	.360	--	--	50	--	--	--	--

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE) (01044)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN) (01054)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
OCT										
17...	--	--	--	--	--	--	--	--	--	--
NOV										
17...	4300	36	2	280	90	190	<.1	7	<1	20
FEB										
07...	--	<3	--	--	--	5	--	--	--	--
MAY										
22...	120000	290	88	1900	1900	6	.3	<1	<1	540
AUG										
13...	--	16	--	--	--	79	--	--	--	--

06880500 BIG BLUE RIVER AT SEWARD, NE

LOCATION (REVISED).--Lat 40°54'10", long 97°06'40", in SE1/4SW1/4 sec.20, T.11 N., R.3 E., Seward County, Hydrologic Unit 10270201, at downstream end of right abutment of bridge on U.S. Highway 34 at west edge of Seward, 1.7 mi upstream from Plum Creek and 0.2 mi downstream from Lincoln Creek.

DRAINAGE AREA.--1,099 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year. Monthly discharge only for some periods, published in WSP 1730.

REVISED RECORDS.--WSP 1919: Drainage area. WDR NE-80-1: 1979(M).

GAGE.--Water-stage recorder. Datum of gage is 1,421.49 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 19, 1969, at present site and datum. Dec. 19, 1969 to Nov. 7, 1983 at site 1.2 mi downstream at datum 6.33 ft lower.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--31 years, 124 ft³/s, 89,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft³/s June 18, 1957, gage height, 22.34 ft; maximum gage height, 22.83 ft June 16, 1967; from stage readings during 1967 flood, gage height at downstream site and datum was approximately 25.66 ft; no flow July 30, 31, 1955, result of irrigation pumping.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 4	1000	1310	11.83	May 5	1700	1250	10.07
Mar. 27	0700	1320	10.44	May 23	2000	1800	12.24
Apr. 3	1900	2680	14.72	June 5	1700	1200	9.67
Apr. 23	0100	1880	12.53	June 16	2300	*5290	18.47
Apr. 30	2100	1100	9.05				

Minimum daily discharge, 13 ft³/s Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	16	48	47	900	122	256	963	146	103	101	47
2	30	17	43	43	1100	138	622	679	146	98	107	64
3	24	348	39	43	1300	128	2380	731	235	96	108	50
4	20	557	40	43	1300	435	2370	975	183	173	113	43
5	18	292	45	44	1250	728	1560	1240	851	338	115	39
6	30	122	45	44	1000	459	1070	1100	660	580	115	40
7	28	72	47	45	760	309	961	964	401	480	105	40
8	22	63	48	45	700	188	806	899	265	528	101	38
9	23	222	45	47	660	137	708	678	254	287	90	36
10	20	264	44	48	620	185	557	562	402	181	87	36
11	173	204	45	47	580	162	373	493	327	135	87	36
12	84	136	45	48	600	146	383	349	1190	104	89	35
13	67	93	45	47	500	143	566	235	2530	103	94	32
14	54	74	43	46	450	162	497	182	4000	94	92	30
15	33	64	41	46	400	195	339	155	4810	84	95	29
16	21	58	41	43	350	215	324	141	4800	80	94	28
17	15	52	46	41	290	176	258	160	4970	78	87	27
18	13	50	44	42	200	124	211	142	3930	78	85	26
19	14	49	46	42	147	102	171	505	2020	89	82	26
20	42	56	48	44	134	107	154	1030	971	93	75	26
21	24	73	44	46	130	139	916	933	469	96	99	26
22	16	93	44	40	145	270	1820	1490	290	101	134	25
23	18	101	47	35	151	464	1770	1730	224	107	188	25
24	19	87	48	32	177	528	1170	1360	188	102	246	25
25	16	90	44	32	215	650	965	827	164	103	260	24
26	15	80	46	32	239	877	824	747	145	106	151	23
27	15	70	48	34	224	1240	469	553	134	102	98	22
28	15	47	49	36	188	1020	254	348	125	113	79	22
29	15	49	46	75	138	659	397	270	116	112	68	21
30	15	58	50	436	---	450	1080	219	110	100	59	21
31	15	---	50	700	---	355	---	176	---	103	52	---
TOTAL	937	3557	1404	2393	14848	11013	24231	20836	35056	4947	3356	962
MEAN	30.2	119	45.3	77.2	512	355	808	672	1169	160	108	32.1
MAX	173	557	50	700	1300	1240	2380	1730	4970	580	260	64
MIN	13	16	39	32	130	102	154	141	110	78	52	21
AC-FT	1860	7060	2780	4750	29450	21840	48060	41330	69530	9810	6660	1910

CAL YR 1983 TOTAL 77941 MEAN 214 MAX 5300 MIN 13 AC-FT 154600
WTR YR 1984 TOTAL 123540 MEAN 338 MAX 4970 MIN 13 AC-FT 245000

06880500 BIG BLUE RIVER AT SEWARD, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT											
17...	1130	15	505	7.9	11.0	9.6	46	K1800	9600	200	57
NOV											
17...	1410	52	694	7.8	5.0	12.1	32	700	2400	300	84
DEC											
14...	1030	41	830	7.7	.0	8.4	19	450	600	390	110
JAN											
09...	1430	44	680	7.9	.0	15.2	14	670	980	280	83
FEB											
07...	0930	780	200	7.4	.0	11.8	240	K150	16000	58	16
MAR											
06...	1045	448	420	7.7	1.0	13.5	120	1700	K24000	140	36
APR											
09...	1000	719	--	7.6	7.5	10.8	120	K150	13000	110	31
MAY											
22...	1045	1510	225	8.0	19.0	6.1	250	33000	K30000	66	18
JUN											
20...	1105	1000	228	7.0	24.0	7.0	170	4200	6600	72	20
JUL											
17...	1055	79	680	7.9	24.0	6.9	51	1200	13000	270	77
AUG											
13...	1115	96	--	7.5	25.0	6.8	200	570	1800	210	60
SEP											
11...	0930	37	605	7.9	17.0	7.5	40	3900	2800	260	75

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
17...	14	59	11	192	2.0	.220	2.4	2.6	4.6	.560	13
NOV											
17...	21	110	10	70	2.4	.120	2.0	2.1	4.5	.410	--
DEC											
14...	25	120	10	32	2.9	.170	.93	1.1	4.0	.380	4.4
JAN											
09...	17	74	9.7	<1	3.2	.170	.93	1.1	4.3	1.60	3.4
FEB											
07...	4.5	23	3.7	714	1.6	1.10	2.5	3.6	5.2	.840	14
MAR											
06...	11	70	7.8	896	<.10	1.00	3.4	4.4	--	1.10	38
APR											
09...	9.1	39	4.3	1060	2.0	.650	6.9	7.5	9.5	2.00	57
MAY											
22...	5.1	28	5.2	3290	2.9	.480	5.5	6.0	8.9	1.80	80
JUN											
20...	5.4	30	3.2	429	2.4	.070	4.9	5.0	7.4	2.00	49
JUL											
17...	19	91	12	279	2.7	.080	2.9	3.0	5.7	.630	14
AUG											
13...	14	49	12	166	3.7	.170	1.7	1.9	5.6	1.10	48
SEP											
11...	17	67	9.1	136	2.0	.200	1.6	1.8	3.8	.510	10

06880500 BIG BLUE RIVER AT SEWARD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
OCT										
17...	1130	--	27	.7	--	--	--	--	--	--
NOV										
17...	1410	45	37	1	12	252	.30	23	450	.61
FEB										
07...	0930	0	5.6	.3	14	67	.10	10	120	.16
MAY										
22...	1045	21	8.3	.5	11	45	.30	12	120	.16
AUG										
13...	1115	0	27	.5	12	212	.50	26	330	.45

DATE	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
OCT										
17...	--	--	--	--	--	--	--	--	--	--
NOV										
17...	63	2.3	.300	5	<100	50	<1	10	9	2600
FEB										
07...	247	1.3	.470	--	--	20	--	--	--	--
MAY										
22...	471	3.0	.270	13	1200	30	<1	70	240	93000
AUG										
13...	83	3.4	.340	--	--	40	--	--	--	--

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE) (01044)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN) (01054)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
OCT										
17...	--	--	--	--	--	--	--	--	--	--
NOV										
17...	2600	30	2	310	60	250	<.1	4	<1	20
FEB										
07...	--	<3	--	--	--	130	--	--	--	--
MAY										
22...	92000	610	72	1600	1600	24	.2	<1	<1	460
AUG										
13...	--	11	--	--	--	40	--	--	--	--

KANSAS RIVER BASIN

06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE

LOCATION.--Lat 40°43'52", long 97°10'38", in SW1/4SW1/4 sec.23, T.9 N., R.2 E., Seward County, Hydrologic Unit 10270203, on right bank 60 ft downstream from bridge on county road, 6.2 mi northwest of Dorchester, and 19 mi upstream from mouth.

DRAINAGE AREA.--1,206 mi².

WATER-DISCHAPGE RECORDS

PERIOD OF RECORD.--August 1958 to current year.

REVISED RECORDS.--WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,403.48 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 14, 1970, on bridge pier 60 ft upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. Some diversion by pumping for irrigation above station. Natural flow of stream affected by ground-water withdrawals for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--26 years, 179 ft³/s, 129,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s Mar. 20, 1969, gage height, 20.34 ft; minimum daily, 12 ft³/s Dec. 31, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1950, reached a stage of 24.8 ft, present datum, from floodmarks, discharge, 49,400 ft³/s, from contracted-opening and flow-over-road measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 4	0600	2260	13.89	May 22	unknown	*6860	a18.32
Apr. 3	1930	2390	13.80	June 17	0100	4710	17.29
Apr. 23	0800	2410	13.85	July 5	0300	2580	14.21

a From floodmark

Minimum daily discharge, 30 ft³/s Dec. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	51	150	60	1700	144	240	897	219	151	235	92
2	279	51	110	70	1950	136	610	859	261	144	240	115
3	214	64	120	80	2100	132	2170	1000	208	145	243	273
4	141	176	120	90	2200	259	2270	791	194	1870	283	199
5	112	144	110	100	1900	259	1760	546	250	2230	288	157
6	84	104	90	110	1500	265	1450	527	280	1770	273	152
7	69	90	70	110	1100	387	1130	499	307	1810	249	131
8	59	75	60	110	710	366	552	378	219	1240	225	105
9	54	231	50	100	675	249	389	464	174	542	228	92
10	101	374	56	80	650	189	307	628	166	386	238	81
11	906	267	60	68	582	173	265	474	181	328	243	74
12	458	197	60	66	590	159	266	317	1090	254	242	70
13	208	139	50	64	482	141	295	257	2540	190	231	67
14	132	128	40	60	408	126	256	212	3410	173	210	63
15	104	111	35	56	325	116	292	239	3670	171	197	61
16	81	95	35	45	283	108	294	417	4090	174	180	63
17	76	83	33	45	241	107	232	227	4330	177	190	62
18	67	74	33	43	209	107	190	201	2990	186	226	59
19	63	69	32	42	182	83	166	430	1880	218	251	58
20	77	127	32	40	147	101	157	2000	1100	267	245	55
21	84	173	31	38	136	132	1050	4700	600	299	322	57
22	67	243	30	45	132	275	1880	6400	417	304	533	55
23	69	199	35	50	151	263	2290	4900	357	270	839	56
24	63	141	33	60	160	260	1960	2850	295	229	665	55
25	55	112	40	70	182	236	1940	1760	252	224	457	55
26	53	95	45	90	204	378	1550	1430	221	239	311	53
27	53	159	50	110	206	577	731	782	200	252	198	53
28	51	269	45	130	185	649	413	469	184	287	158	55
29	52	270	40	250	162	729	473	352	173	297	147	53
30	51	200	40	700	---	651	1040	295	162	285	121	53
31	51	---	45	1500	---	351	---	252	---	251	103	---
TOTAL	4120	4511	1780	4482	19452	8108	26618	35553	30420	15343	8571	2574
MEAN	133	150	57.4	145	671	262	887	1147	1014	495	276	85.8
MAX	906	374	150	1500	2200	729	2290	6400	4330	2230	839	273
MIN	51	51	30	38	132	83	157	201	162	144	103	53
AC-FT	8170	8950	3530	8890	38580	16080	52800	70520	60340	30430	17000	5110

CAL YR 1983 TOTAL 71813 MEAN 197 MAX 4160 MIN 30 AC-FT 142400
WTR YR 1984 TOTAL 161532 MEAN 441 MAX 6400 MIN 30 AC-FT 320400

KANSAS RIVER BASIN

06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-70, 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
OCT											
25...	1200	57	560	7.8	9.5	9.8	31	K18000	15000	210	64
NOV											
15...	1500	106	480	7.8	6.5	11.6	53	K6200	35000	150	44
DEC											
14...	1045	26	600	7.8	.0	9.7	16	300	840	240	73
JAN											
11...	1600	66	632	7.7	.0	13.1	16	K160	5000	230	70
FEB											
08...	1100	717	170	7.2	.0	14.1	63	K300	4000	50	14
MAR											
05...	1510	255	377	7.4	4.0	11.0	100	2000	K38000	110	30
APR											
10...	0930	314	309	8.2	8.5	10.1	75	2000	14000	110	33
MAY											
09...	1300	433	328	7.1	12.0	8.8	87	1600	6300	120	34
JUN											
05...	1015	206	490	7.3	19.0	7.3	92	K17000	12000	180	53
JUL											
09...	0950	654	179	6.9	24.5	5.9	150	5900	36000	59	17
AUG											
29...	1800	150	395	7.3	27.0	6.9	50	2200	18000	170	50
SEP											
25...	1140	58	550	8.4	12.5	10.0	40	290	1200	230	70

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
25...	12	54	22	88	2.4	.910	1.7	2.6	5.0	.930	8.7
NOV											
15...	9.3	39	23	170	2.7	.290	.51	.80	3.5	1.50	13
DEC											
14...	15	59	17	24	2.8	.660	.54	1.2	4.0	.600	2.5
JAN											
11...	13	58	23	11	2.6	.630	.77	1.4	4.0	.650	2.8
FEB											
08...	3.6	20	7.5	300	1.5	1.20	2.4	3.6	5.1	.900	23
MAR											
05...	7.7	41	14	850	<.10	1.20	4.0	5.2	--	1.40	31
APR											
10...	7.9	31	7.4	810	2.0	1.20	6.3	7.5	9.5	1.70	22
MAY											
09...	7.5	39	10	998	2.4	.360	3.6	4.0	6.4	1.90	31
JUN											
05...	11	50	12	475	2.5	.100	.50	.60	3.1	1.10	25
JUL											
09...	4.0	19	5.1	2040	4.3	.150	6.4	6.5	11	1.60	49
AUG											
29...	9.9	52	11	360	2.1	.120	.28	.40	2.5	.680	14
SEP											
25...	14	61	16	48	.50	.030	1.4	1.4	1.9	.420	4.9

06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
NOV										
15...	1500	0	31	1	14	148	.30	23	270	.37
FEB										
08...	1100	3	12	.8	14	47	.20	13	110	.15
MAY										
09...	1300	10	15	.6	9.9	106	.30	18	200	.27
AUG										
29...	1800	17	21	.7	12	149	.40	21	270	.36

DATE	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
NOV										
15...	78	2.7	1.10	6	400	70	<1	10	21	10000
FEB										
08...	219	1.6	.510	--	--	20	--	--	--	--
MAY										
09...	231	2.4	.390	14	600	40	<1	20	41	35000
AUG										
29...	108	<.10	.310	--	--	50	--	--	--	--

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE) (01044)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN) (01054)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
NOV										
15...	9900	100	7	280	210	71	.1	2	<1	60
FEB										
08...	--	590	--	--	--	45	--	--	--	--
MAY										
09...	35000	82	29	560	550	15	<.1	2	<1	150
AUG										
29...	--	11	--	--	--	15	--	--	--	--

06881000 BIG BLUE RIVER NEAR CRETE, NE

LOCATION.--Lat 40°35'47", long 96°57'36", in SW1/4SE1/4 sec.3, T.7 N., R.4 E., Saline County, Hydrologic Unit 10270202, on right bank on downstream side of county road bridge, 1.8 mi south of Missouri Pacific Railroad station in Crete, 3.3 mi downstream from Walnut Creek, and 3.6 mi upstream from Squaw Creek.

DRAINAGE AREA.--2,716 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1945 to current year. Prior to Oct. 1, 1953, discharge published only for stages above 12.0 ft because of variable backwater from dam downstream until 1952 and diurnal fluctuation from powerplant upstream in 1952-53.

REVISED RECORDS.--WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,311.7 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 20, 1954, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by ground-water and surface-water withdrawals for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--31 years (1953-84), 378 ft^3/s, 273,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,600 ft^3/s July 10, 1950, gage height, 28.74 ft; maximum gage height, 29.80 ft June 16, 1967; minimum daily discharge, 6.0 ft^3/s Aug. 1, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 3	----	4600	ice jam	May 24	0500	7900	23.46
Apr. 4	1700	6680	22.33	June 18	0800	*10500	25.16
Apr. 23	0400	5430	20.92	July 4	2300	5810	21.83
May 19	2100	6980	22.65				

Minimum daily discharge, 112 ft^3/s Oct. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	898	114	160	150	2000	453	836	2680	717	488	423	207
2	412	114	170	150	3000	419	1230	2060	864	466	410	208
3	381	124	150	140	4200	424	4920	2140	791	454	412	233
4	303	517	150	130	4600	491	6440	2180	736	3460	420	358
5	229	806	148	140	4200	1100	5820	2120	911	5070	456	281
6	191	527	148	140	3410	1110	3700	2120	1600	3630	465	238
7	163	320	160	148	2760	850	2650	1930	1230	2500	438	223
8	158	244	160	150	2000	808	1970	1680	918	2360	409	211
9	139	249	150	150	1640	599	1440	1420	1040	1580	383	185
10	131	764	145	150	1600	428	1210	1260	830	959	375	176
11	682	836	140	160	1560	471	1030	1250	824	762	373	167
12	1530	574	158	150	1520	461	1190	1040	2510	628	373	158
13	721	419	137	140	1460	436	988	843	8020	517	382	153
14	389	312	156	150	1280	427	987	693	7740	461	363	149
15	295	271	134	150	1140	481	888	610	7640	429	338	142
16	229	239	149	150	1030	492	801	772	8870	410	329	138
17	182	213	130	150	929	472	745	831	9870	399	310	138
18	161	195	120	140	812	427	633	984	10100	394	318	136
19	146	188	140	130	676	377	552	4570	7550	405	342	132
20	139	181	150	130	497	314	496	5230	4960	434	362	129
21	173	227	160	130	461	339	1920	3810	2250	478	387	126
22	193	287	155	130	456	703	4970	3910	1360	495	538	125
23	150	354	150	140	534	989	5230	6340	1110	496	769	124
24	140	337	160	140	601	1000	4510	7470	885	458	985	125
25	139	275	170	145	664	1010	3320	5130	764	412	843	122
26	130	250	180	150	732	1200	2980	2820	689	410	730	122
27	122	213	170	160	744	2040	2120	2260	630	429	518	122
28	119	150	160	173	664	2210	1190	1470	584	443	363	121
29	115	170	150	193	534	1800	934	1100	547	474	288	123
30	112	180	140	500	---	1440	2000	976	514	490	267	123
31	113	---	140	1500	---	1130	---	823	---	453	234	---
TOTAL	8985	9650	4690	6259	45704	24901	67700	72522	87054	30844	13603	4995
MEAN	290	322	151	202	1576	803	2257	2339	2902	995	439	167
MAX	1530	836	180	1500	4600	2210	6440	7470	10100	5070	985	358
MIN	112	114	120	130	456	314	496	610	514	394	234	121
AC-FT	17820	19140	9300	12410	90650	49390	134300	143800	172700	61180	26980	9910

CAL YR 1983 TOTAL 208923 MEAN 572 MAX 12600 MIN 80 AC-FT 414400
WTR YR 1984 TOTAL 376907 MEAN 1030 MAX 10100 MIN 112 AC-FT 747600

06881000 BIG BLUE RIVER NEAR CRETE, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1961 to September 1962, April 1968 to current year.
SEDIMENT RECORDS: October 1961 to September 1962.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 33.5°C July 10, 1980; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 29.5°C Aug. 8-10; minimum, 0.5°C on several days during winter period.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.0	18.5	13.0	11.0	1.0	.5	---	---	---	---	4.0	2.5
2	20.5	19.5	14.5	13.0	1.0	.5	---	---	---	---	4.5	4.0
3	20.5	19.0	14.5	14.0	1.0	.5	---	---	---	---	4.5	4.0
4	19.5	17.5	14.5	12.5	1.0	1.0	---	---	---	---	4.5	4.5
5	18.0	16.0	12.5	12.0	1.0	1.0	---	---	---	---	4.5	3.0
6	17.0	16.0	12.0	12.0	1.0	1.0	---	---	---	---	3.0	2.5
7	16.5	15.5	12.0	11.5	1.0	1.0	1.5	1.0	---	---	3.5	2.5
8	16.0	14.0	12.0	11.5	1.5	1.0	1.5	1.0	---	---	3.5	1.0
9	14.0	13.5	11.5	7.0	1.0	.5	1.5	1.0	---	---	1.5	1.0
10	15.0	14.0	7.0	5.5	1.0	.5	1.0	.5	.5	.5	2.0	1.0
11	15.5	15.0	5.5	4.5	1.0	1.0	1.5	1.0	1.0	.5	2.0	1.0
12	15.0	13.5	4.5	4.0	1.0	.5	1.5	1.0	1.0	1.0	2.0	1.0
13	13.5	11.5	5.0	4.0	1.5	1.0	1.0	.5	1.0	1.0	4.0	2.0
14	12.0	10.0	5.5	5.0	1.0	.5	1.0	.5	2.0	1.5	5.5	4.0
15	13.5	11.5	5.5	5.5	1.5	.5	1.0	1.0	2.5	2.0	6.0	4.5
16	13.5	12.5	5.5	4.5	1.0	.5	1.0	.5	3.0	2.5	4.5	3.5
17	13.0	11.5	5.5	4.5	1.0	1.0	1.0	.5	4.0	3.0	3.5	3.0
18	13.0	12.5	6.5	5.5	1.0	.5	---	---	4.0	2.0	3.5	.5
19	13.0	13.0	7.5	6.5	---	---	---	---	2.5	1.5	1.5	.5
20	13.0	12.5	7.5	5.5	---	---	---	---	3.0	1.5	4.0	1.0
21	12.5	11.0	6.5	6.0	---	---	---	---	3.5	2.0	5.0	3.5
22	11.0	11.0	6.0	5.5	---	---	---	---	4.5	3.0	5.0	3.5
23	11.5	11.0	5.5	4.0	---	---	---	---	4.5	3.5	4.5	3.5
24	11.5	10.5	4.0	2.0	---	---	---	---	4.5	3.5	5.0	4.0
25	10.5	9.5	3.0	2.5	---	---	---	---	4.5	4.0	6.0	4.5
26	11.0	9.5	3.5	3.0	---	---	---	---	4.5	4.0	6.0	6.0
27	12.0	10.0	3.0	1.0	---	---	---	---	4.5	3.5	6.0	6.0
28	12.5	12.0	2.0	1.0	---	---	---	---	3.5	2.5	6.0	5.5
29	12.5	10.5	2.0	1.0	---	---	---	---	3.0	1.5	5.5	4.5
30	10.5	10.0	1.0	1.0	---	---	---	---	---	---	5.5	4.5
31	11.0	10.5	---	---	---	---	---	---	---	---	5.5	5.5
MONTH	20.5	9.5	14.5	1.0	1.5	.5	1.5	.5	4.5	.5	6.0	.5

06881000 BIG BLUE RIVER NEAR CRETE, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.5	5.0	7.0	5.5	19.0	17.5	26.5	25.0	27.5	27.5	24.5	24.5
2	5.5	4.5	8.0	6.5	19.0	17.0	25.0	24.5	28.0	27.5	24.5	24.5
3	4.5	4.5	10.5	8.0	19.5	18.0	25.5	24.5	28.5	28.0	24.5	23.5
4	5.0	4.5	11.5	10.5	20.0	19.5	25.5	24.0	28.5	28.5	23.5	23.5
5	6.0	5.0	12.0	11.5	22.5	20.0	24.0	23.5	28.5	28.0	23.5	23.0
6	7.5	6.0	12.0	12.0	22.5	21.5	24.5	24.0	29.0	28.0	23.0	22.0
7	8.0	7.5	12.0	12.0	24.0	23.0	24.5	24.5	29.0	29.0	22.0	22.0
8	8.0	8.0	12.0	11.5	24.5	23.0	24.5	24.5	29.5	29.0	22.0	21.5
9	8.0	8.0	12.5	11.5	24.5	22.0	25.5	24.5	29.5	29.5	21.5	21.5
10	8.0	8.0	14.0	12.5	23.0	21.0	26.0	25.5	29.5	28.5	21.5	21.5
11	9.0	8.0	15.0	14.0	23.0	22.0	26.0	26.0	28.5	28.0	21.5	20.5
12	9.0	9.0	16.5	15.0	23.0	21.0	26.0	26.0	28.0	28.0	20.5	20.5
13	9.0	8.5	17.5	16.5	23.0	21.5	26.0	26.0	28.0	28.0	20.5	20.5
14	8.5	8.0	18.5	17.0	23.5	23.0	26.0	26.0	28.0	28.0	20.5	20.5
15	9.5	8.0	18.5	16.5	24.0	23.5	26.0	25.5	28.0	28.0	20.5	19.0
16	11.0	9.0	18.0	15.5	25.0	24.0	26.5	26.5	28.0	28.0	19.0	18.0
17	12.0	10.0	19.0	17.0	25.0	25.0	26.5	26.5	28.0	28.0	18.0	17.5
18	13.0	10.5	19.0	18.0	25.5	25.0	26.5	26.5	28.0	27.5	17.5	17.5
19	13.5	11.0	19.0	17.5	26.0	25.5	26.5	26.5	27.5	27.5	17.5	18.0
20	13.5	10.5	18.0	17.5	26.0	26.0	27.0	26.5	27.5	27.5	17.5	17.5
21	10.5	7.5	19.5	18.0	26.5	26.0	27.0	27.0	27.5	26.0	18.0	17.5
22	7.5	6.5	19.5	18.5	27.0	26.5	27.0	27.0	26.0	26.0	17.5	17.5
23	6.5	6.0	19.0	18.0	26.5	26.0	27.5	27.0	26.0	25.5	17.5	17.5
24	9.0	6.5	19.0	18.5	26.0	25.5	28.5	27.5	25.5	25.5	18.0	17.5
25	11.5	9.0	18.5	18.0	26.0	25.0	29.0	28.5	25.5	25.0	18.0	16.0
26	14.5	11.5	18.0	16.5	27.0	25.5	29.0	29.0	25.0	25.0	16.0	14.5
27	14.5	10.5	16.5	15.0	27.0	26.0	29.0	28.5	25.0	25.0	14.5	13.5
28	14.5	12.5	15.0	14.0	26.5	26.0	28.5	28.0	25.5	25.0	13.5	13.0
29	13.0	9.0	14.5	13.5	26.5	25.5	28.0	28.0	25.5	25.5	13.0	12.0
30	9.0	7.0	16.0	14.0	26.5	25.5	28.0	28.0	25.5	25.5	12.0	11.5
31	---	---	17.5	15.5	---	---	28.0	27.5	25.5	24.5	---	---
MONTH	14.5	4.5	19.5	5.5	27.0	17.0	29.0	23.5	29.5	24.5	24.5	11.5
YEAR	29.5	.5										

06881200 TURKEY CREEK NEAR WILBER, NE

LOCATION.--Lat 40°28'48", long 97°00'43", in NE1/4NE1/4 sec.19, T.6 N., R.4 E., Saline County, Hydrologic Unit 10270204, on left bank near downstream side of bridge on State Highway 41, 2.8 mi west of Wilber.

DRAINAGE AREA.--460 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

REVISED RECORDS.--WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,322.00 ft National Geodetic Vertical Datum of 1929. Prior to July 10, 1970, at site 0.2 mile downstream at same datum.

REMARKS.--Records fair except those for winter period, which are poor. Many diversions above station for irrigation.

AVERAGE DISCHARGE.--25 years, 92.6 ft³/s, 67,090 acre-ft/yr; median of yearly mean discharges, 65 ft³/s, 47,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s June 13, 1984, gage height, 21.43 ft from highwater mark; no flow Sept. 20, 21, 24, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 2	1300	2470	14.02	May 21	unknown	3600	a15.26
Oct. 14	0300	1580	12.49	June 5	1130	1750	12.81
Feb. 4	0200	2210	13.61	June 10	0300	1560	12.41
Apr. 4	1200	2780	14.42	June 13	unknown	*33000	a21.43
Apr. 23	1530	2650	14.25	July 5	1430	2040	11.70

a From floodmark

Minimum daily discharge, 5.9 ft³/s Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1490	18	26	24	1900	103	76	805	83	73	53	13
2	2310	17	20	25	2040	79	382	593	121	66	54	27
3	726	18	19	23	2090	79	1970	352	429	61	53	26
4	184	19	19	22	2110	77	2700	285	146	188	54	29
5	112	43	19	20	1550	144	2550	174	1080	1630	53	27
6	74	35	19	19	703	201	1050	149	1040	847	55	31
7	56	28	18	19	296	135	232	123	805	587	56	26
8	48	29	17	20	237	104	160	105	259	331	52	21
9	40	30	17	20	206	83	134	100	814	330	47	18
10	34	125	16	26	251	60	118	95	682	290	46	18
11	39	286	15	21	287	64	112	86	160	143	51	16
12	806	233	18	17	285	79	289	74	1750	109	46	16
13	1270	146	16	19	245	66	151	67	13100	84	45	14
14	1010	83	19	19	186	61	115	63	10400	76	41	14
15	194	55	17	14	147	69	105	60	6740	70	44	13
16	111	41	15	15	128	65	94	59	5880	66	40	11
17	68	32	14	17	118	63	79	58	5570	67	31	9.3
18	49	27	13	15	112	71	70	53	4310	68	40	8.8
19	39	25	14	14	102	70	63	1190	2970	66	36	8.1
20	33	23	15	13	93	78	59	3250	940	67	36	8.0
21	30	21	13	14	81	101	669	3550	468	67	50	7.8
22	27	23	12	15	85	257	2120	2550	295	65	59	7.3
23	26	47	13	17	92	444	2590	832	240	65	77	7.1
24	24	67	13	19	137	317	2390	294	200	63	160	6.5
25	22	39	15	18	140	217	832	215	170	61	98	6.4
26	21	27	17	16	130	192	222	188	140	58	56	6.0
27	20	42	18	15	124	311	156	143	115	55	34	6.0
28	19	28	17	28	125	268	125	132	94	54	26	6.0
29	18	23	18	238	134	201	176	107	88	56	20	5.9
30	18	20	19	708	---	137	535	98	83	58	16	6.8
31	18	---	21	1210	---	95	---	96	---	52	14	---
TOTAL	8936	1650	522	2680	14134	4291	20324	15946	59172	5873	1543	420.0
MEAN	288	55.0	16.8	86.5	487	138	677	514	1972	189	49.8	14.0
MAX	2310	286	26	1210	2110	444	2700	3550	13100	1630	160	31
MIN	18	17	12	13	81	60	59	53	83	52	14	5.9
AC-FT	17720	3270	1040	5320	28030	8510	40310	31630	117400	11650	3060	833

CAL YR 1983 TOTAL 43041.8 MEAN 118 MAX 2710 MIN 2.2 AC-FT 85370
WTR YR 1984 TOTAL 135491.0 MEAN 370 MAX 13100 MIN 5.9 AC-FT 268700

06881200 TURKEY CREEK NEAR WILBER, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-70, 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
OCT 25...	1030	22	440	7.8	9.0	9.2	28	K930	6000	150	44
NOV 16...	1100	42	265	7.4	3.0	12.2	64	9300	23000	78	22
DEC 14...	1415	18	710	7.6	.0	11.0	23	K110	410	260	77
JAN 11...	1330	22	688	7.8	.0	10.4	17	K200	4400	230	71
FEB 08...	1245	197	165	7.2	.0	13.2	53	K100	2200	49	14
MAR 05...	1225	162	430	7.7	3.0	12.0	63	900	7500	140	39
APR 10...	1030	146	400	8.4	9.0	10.2	74	K250	2200	160	44
MAY 09...	1500	102	510	7.5	13.5	10.3	41	440	600	180	53
JUN 05...	1245	955	120	--	19.0	7.2	270	35000	K14000	32	9.2
JUL 09...	1110	330	281	7.4	24.0	7.6	130	K6900	21000	98	28
AUG 29...	1500	19	--	7.1	25.0	5.6	60	1400	12000	130	37
SEP 25...	1345	6.0	700	8.2	14.0	7.9	40	200	580	220	66

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 25...	10	46	25	87	.80	.090	1.2	1.3	2.1	.520	7.3
NOV 16...	5.7	30	14	--	1.4	.300	.40	.70	2.1	.700	18
DEC 14...	16	87	38	13	1.2	.040	.76	.80	2.0	.420	3.5
JAN 11...	14	70	32	10	1.3	.320	.18	.50	1.8	.400	3.9
FEB 08...	3.4	21	5.9	160	1.2	1.00	1.8	2.8	4.0	.610	16
MAR 05...	9.6	57	11	408	<.10	.570	2.2	2.8	--	.650	16
APR 10...	11	44	11	464	1.3	.800	6.2	7.0	8.3	.850	19
MAY 09...	12	67	19	146	1.3	.190	1.2	1.4	2.7	.550	11
JUN 05...	2.3	18	2.4	2620	1.5	.520	.48	1.0	2.5	1.20	120
JUL 09...	6.7	42	8.5	1480	3.0	.090	5.9	6.0	9.0	1.00	39
AUG 29...	8.0	49	23	180	1.8	.160	--	<.20	--	.530	13
SEP 25...	14	66	69	172	.50	.050	1.2	1.2	1.7	.370	110

06881200 TURKEY CREEK NEAR WILBER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
NOV 16...	1100	11	14	.7	14	68	.20	15	160	.22	22
FEB 08...	1245	2	5.7	.4	13	47	.20	13	110	.14	56
MAY 09...	1500	13	29	1	8.8	169	.30	20	310	.42	86
AUG 29...	1500	16	29	1	11	110	.40	16	240	.33	12

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)
NOV 16...	1.4	.400	5	<100	20	<1	<10	23	10000	9700
FEB 08...	1.3	.350	--	--	20	--	--	100	--	--
MAY 09...	1.3	.300	5	300	30	<1	20	13	11000	11000
AUG 29...	1.6	.260	--	--	50	--	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV 16...	330	12	180	160	23	.1	--	1	<1	70
FEB 08...	630	--	--	--	50	--	370	--	--	--
MAY 09...	28	9	350	250	100	<.1	--	3	<1	50
AUG 29...	47	--	--	--	100	--	--	--	--	--

06881500 BIG BLUE RIVER AT BEATRICE, NE

LOCATION.--Lat 40°15'22", long 96°44'47", in SW1/4NW1/4 sec.3, T.3 N., R.6 E., Gage County, Hydrologic Unit 10270202, at left upstream corner of 6th Street and U.S. Highway 77 bridge in Beatrice, 0.7 mi south of the intersection of U.S. Highways 136 and 77, 1.2 mi downstream from Indian Creek, and 3.1 mi upstream from Bear Creek.

DRAINAGE AREA.--3,900 mi², of which about 3,830 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1910 to September 1915, (monthly discharge only for some periods, published in WSP 1310), 1954, 1960-65, 1967-69, 1971-74 (discharge measurements only), October 1974 to current year. Gage-height records collected 1905-10, 1916-74, are in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,219.90 ft National Geodetic Vertical Datum of 1929. October 1910 to September 1915, non-recording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--15 years (water years 1911-15, 1975-84), 727 ft³/s, 526,700 acre-ft/yr; median of yearly mean discharges, 605 ft³/s, 438,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,100 ft³/s June 14, 1984, gage height, 31.27 ft; minimum daily, 20 ft³/s Aug. 15, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1902, 55,100 ft³/s June 14, 1984; maximum gage height, 33.02 ft Oct. 12, 1973, from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 1	1230	4220	9.84	May 21	1530	10800	17.17
Feb. 2	----	7500	ice jam	June 7	0130	6340	12.58
Apr. 4	1930	10700	17.09	June 10	1330	8270	14.66
Apr. 23	1030	10400	16.79	June 14	0630	*55100	31.27
May 1	0730	4810	10.80	July 6	1430	6330	12.89

Minimum daily discharge, 169 ft³/s Sept. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3680	181	200	200	3500	829	1520	4740	1220	722	659	311
2	2480	181	210	200	6000	714	3500	4360	1130	674	637	396
3	2320	189	230	195	7000	650	8570	3430	1290	744	603	364
4	1250	185	250	200	6400	654	10100	3350	1490	1480	594	322
5	695	289	260	205	6000	683	9870	3180	2470	3860	604	380
6	496	807	250	210	5600	1360	9510	2920	5320	6090	626	361
7	408	650	240	210	4540	1460	6550	2830	4960	4860	631	292
8	345	446	240	215	3550	1130	3710	2600	2460	3450	623	315
9	310	377	230	215	2940	1040	2760	2260	3490	2840	589	278
10	297	372	225	210	2510	827	2140	1950	7940	1990	557	273
11	654	845	230	220	2520	652	1820	1750	4450	1310	540	272
12	2210	1170	225	220	2570	659	2040	1700	3670	1020	542	244
13	2890	873	210	200	2340	656	2440	1430	18100	857	540	264
14	2170	645	215	210	2120	646	1670	1190	44400	736	535	238
15	1360	463	220	200	1810	630	1520	1130	25900	673	527	220
16	677	403	200	200	1570	673	1370	1620	19400	630	505	215
17	504	359	190	195	1420	706	1230	1320	16600	592	484	206
18	399	319	180	190	1310	699	1140	1230	18200	578	480	204
19	341	289	185	180	1170	671	1010	6920	16600	571	472	201
20	306	268	200	190	1010	651	905	9520	13600	566	488	196
21	278	252	210	200	827	623	3160	10400	9000	586	642	187
22	262	250	180	210	746	1250	7970	9710	3600	608	730	185
23	304	322	200	210	735	2090	10000	8250	2150	626	780	182
24	271	371	190	220	805	2090	8810	7400	1660	623	931	174
25	237	430	215	220	906	1860	7950	8030	1340	612	1190	169
26	233	364	230	230	961	1880	5210	7740	1150	591	1060	181
27	222	308	220	230	1010	2880	3940	4210	1020	567	897	209
28	208	250	210	250	1010	3500	2810	2970	918	584	704	191
29	189	220	200	250	951	3210	2310	2090	842	604	530	180
30	182	230	190	1500	---	2500	4170	1650	778	636	409	178
31	181	---	190	2500	---	1950	---	1410	---	667	349	---
TOTAL	26359	12328	6625	10085	73831	39823	129705	123290	235148	40947	19458	7388
MEAN	850	411	214	325	2546	1285	4324	3977	7838	1321	628	246
MAX	3680	1170	260	2500	7000	3500	10100	10400	44400	6090	1190	396
MIN	181	181	180	180	735	623	905	1130	778	566	349	169
AC-FT	52280	24450	13140	20000	146400	78990	257300	244500	466400	81220	38590	14650

CAL YR 1983 TOTAL 327649 MEAN 898 MAX 13800 MIN 137 AC-FT 649900
WTR YR 1984 TOTAL 724987 MEAN 1981 MAX 44400 MIN 169 AC-FT 1438000

06882000 BIG BLUE RIVER AT BARNESTON, NE

LOCATION.--Lat 40°02'40", long 96°35'12", in NE1/4NW1/4 sec.24, T.1 N., R.7 E., Gage County, Hydrologic Unit 10270202, on right bank at right downstream end of bridge on State Highway 8, 0.6 mi southwest of Barneston, 1.3 mi upstream from Plum Creek, and 4.3 mi upstream from Nebraska-Kansas State line.

DRAINAGE AREA.--4,447 mi², of which about 4,370 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1932 to current year.

REVISED RECORDS.--WSP 896: 1932, 1935. WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,162.2 ft National Geodetic Vertical Datum of 1929. Prior to June 9, 1941, water-stage recorder at site 0.3 mi downstream at datum 1.56 ft higher. June 9 to Nov. 17, 1941, nonrecording gage and Nov. 18, 1941, to Sept. 30, 1979, water-stage recorder at site 0.7 mi upstream at datum 2.0 ft higher.

REMARKS.--Records fair except those for winter period, which are poor. Low flow regulated by powerplant 0.7 mi upstream. No large tributaries between station and Nebraska-Kansas State line. Some pump diversions for irrigation above station. Natural flow of stream affected by ground-water withdrawals for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--52 years, 817 ft³/s, 591,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,700 ft³/s June 9, 1941, gage height, 34.3 ft; minimum daily, 1 ft³/s Nov. 30, 1945.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 3	0445	16400	20.39	June 9	2345	12100	17.70
Apr. 23	1400	11400	17.10	June 14	1930	*55800	30.21
Apr. 30	0130	10500	16.43	June 19	0130	20700	22.38
May 19	2115	18100	21.24				

Minimum daily discharge, 146 ft³/s Oct. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2990	175	227	230	4100	926	1820	5600	1450	910	732	373
2	2420	200	295	300	5500	758	6900	4730	1450	841	703	465
3	2110	226	323	270	8000	614	14800	3920	1380	865	647	467
4	1550	256	299	260	9000	679	12800	3540	1750	2860	641	401
5	740	194	337	260	7500	686	10900	3370	1830	3640	645	428
6	512	572	350	260	6200	1120	9270	3010	4360	6040	675	484
7	405	726	340	280	5100	1570	7240	2940	4910	5760	691	421
8	324	564	310	250	4500	1260	4000	2710	2660	4140	674	360
9	253	394	300	270	3300	1110	3170	2430	5030	3530	630	356
10	341	368	280	260	2700	955	2390	2140	10200	2650	589	365
11	349	596	270	270	2600	681	2040	1920	5860	1800	555	288
12	1520	1270	270	260	2600	647	2220	1860	2830	1330	542	300
13	2610	1040	260	260	2500	653	2670	1680	16100	1110	545	314
14	2100	793	260	270	2200	1000	1960	1390	40400	925	548	286
15	1590	571	272	230	2000	684	1720	1890	45700	793	548	271
16	777	455	178	280	1800	679	1600	2320	32300	724	528	249
17	561	412	248	270	1600	771	1410	1720	20800	702	507	245
18	433	378	250	260	1400	831	1300	1560	19500	655	488	240
19	365	308	240	250	1200	789	1130	11000	19600	644	463	234
20	329	275	250	250	1000	732	1020	13400	15400	623	462	231
21	327	354	270	230	900	834	4630	11300	11200	647	540	229
22	226	291	280	250	800	1410	10000	11800	5400	667	636	225
23	239	340	270	270	731	2680	10500	9160	3110	702	655	220
24	350	330	270	280	771	2890	8750	7550	2330	706	860	185
25	291	481	230	280	904	2630	7750	8360	1780	713	1250	193
26	225	451	300	280	1000	2820	5660	8230	1520	694	1250	205
27	245	403	280	290	1080	4020	4710	5000	1320	654	1080	209
28	250	326	270	280	1340	3970	3290	3370	1160	659	866	214
29	213	214	280	300	1070	3960	4630	2490	1050	677	645	182
30	146	205	280	800	---	2940	8120	1970	964	700	507	206
31	271	---	280	1500	---	2270	---	1680	---	738	395	---
TOTAL	25062	13168	8569	10000	83396	47569	158400	144040	283344	48099	20497	8846
MEAN	808	439	276	323	2876	1534	5280	4646	9445	1552	661	295
MAX	2990	1270	350	1500	9000	4020	14800	13400	45700	6040	1250	484
MIN	146	175	178	230	731	614	1020	1390	964	623	395	182
AC-FT	49710	26120	17000	19840	165400	94350	314200	285700	562000	95400	40660	17550

CAL YR 1983 TOTAL 393799 MEAN 1079 MAX 13300 MIN 111 AC-FT 781100
WTR YR 1984 TOTAL 850990 MEAN 2325 MAX 45700 MIN 146 AC-FT 1688000

06882000 BIG BLUE RIVER AT BARNESTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-69, October 1980 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1966 to September 1969.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 29.0°C on several days in summer periods; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
OCT											
11...	1530	385	365	8.0	11.5	--	39	18000	3900	120	33
NOV											
07...	1200	708	715	8.3	11.5	9.8	23	5200	1100	240	70
DEC											
06...	1220	297	--	7.8	1.0	12.7	23	3600	1200	250	72
JAN											
05...	1230	439	815	7.8	.5	14.3	22	1800	K400	300	89
FEB											
01...	1450	4100	260	7.2	.0	17.0	76	3500	47000	88	25
28...	1230	1060	530	8.0	2.5	15.2	42	K710	2000	190	54
APR											
03...	1430	14100	180	7.2	4.0	11.8	200	7700	33000	58	16
30...	1145	7990	217	7.6	9.0	15.0	140	8300	K21000	69	19
MAY											
30...	1230	2080	364	7.7	16.0	10.8	100	3500	2100	140	39
JUL											
11...	1030	2510	250	7.3	24.5	8.0	140	4000	4400	88	25
AUG											
22...	1300	624	645	8.3	25.5	9.0	160	K160	760	240	68
SEP											
19...	1030	232	730	7.9	19.0	9.5	30	120	460	220	64

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
11...	8.0	41	22	114	2.1	.260	2.2	2.5	4.6	.740	12
NOV											
07...	15	71	47	55	2.7	.140	1.7	1.8	4.5	.740	5.3
DEC											
06...	17	77	48	24	1.9	.200	1.8	2.0	3.9	.770	5.6
JAN											
05...	19	93	44	6	3.1	.770	.83	1.6	4.7	.750	3.3
FEB											
01...	6.1	27	8.5	536	2.2	.710	1.3	2.0	4.2	.900	18
28...	13	65	20	143	2.2	.440	1.5	1.9	4.1	.560	8.1
APR											
03...	4.3	24	5.3	2850	1.7	.070	9.9	10	12	2.00	58
30...	5.2	27	6.7	1620	1.6	.070	2.6	2.7	4.3	2.30	47
MAY											
30...	9.5	43	11	1020	2.7	.020	4.0	4.0	6.7	.900	34
JUL											
11...	6.1	28	8.6	1770	3.9	.080	6.4	6.5	10	1.10	45
AUG											
22...	16	75	35	74	2.6	.060	1.0	1.1	3.7	.590	7.5
SEP											
19...	15	78	46	38	2.5	.020	2.3	2.3	4.8	.640	6.1

06882000 BIG BLUE RIVER AT BARNESTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
OCT										
11...	1530	--	24	1	--	--	--	--	--	--
NOV										
07...	1200	13	55	2	10	224	.30	27	430	.58
DEC										
06...	1220	--	55	2	--	--	--	--	--	--
JAN										
05...	1230	--	60	2	--	--	--	--	--	--
FEB										
01...	1450	6	12	.6	10	82	.30	13	150	.21
28...	1230	--	30	1	--	--	--	--	--	--
APR										
03...	1430	--	8.9	.5	--	--	--	--	--	--
30...	1145	8	10	.5	7.9	61	.30	14	130	.17
MAY										
30...	1230	--	19	.7	--	--	--	--	--	--
JUL										
11...	1030	--	13	.6	--	--	--	--	--	--
AUG										
22...	1300	20	46	1	9.9	216	.40	23	400	.55
SEP										
19...	1030	--	50	2	--	--	--	--	--	--

DATE	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
OCT										
11...	--	--	--	--	--	--	--	--	--	--
NOV										
07...	821	2.7	.670	7	400	70	2	<10	18	2600
DEC										
06...	--	--	--	--	--	--	--	--	--	--
JAN										
05...	--	--	--	--	--	--	--	--	--	--
FEB										
01...	1680	2.0	.330	5	200	30	<1	20	19	16000
28...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
30...	2750	1.6	.210	7	600	40	<1	50	52	52000
MAY										
30...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	--	--	--	--	--	--	--	--	--	--
AUG										
22...	679	2.2	.390	6	200	50	<1	<10	8	50
SEP										
19...	--	--	--	--	--	--	--	--	--	--

06882000 BIG BLUE RIVER AT BARNESTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
OCT										
11...	--	--	--	--	--	--	--	--	--	--
NOV										
07...	2600	13	5	120	100	24	<.1	3	<1	30
DEC										
06...	--	--	--	--	--	--	--	--	--	--
JAN										
05...	--	--	--	--	--	--	--	--	--	--
FEB										
01...	16000	330	13	600	380	220	<.1	2	<1	70
28...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
30...	51000	610	30	830	810	25	.1	<1	<1	200
MAY										
30...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	--	--	--	--	--	--	--	--	--	--
AUG										
22...	--	6	<1	<10	--	9	<.1	4	<1	<10
SEP										
19...	--	--	--	--	--	--	--	--	--	--

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE

LOCATION.--Lat 40°19'58", long 98°04'00", in SW1/4NW1/4 sec.12, T.4 N., R.7 W., Nuckolls County, Hydrologic Unit 10270206, on right bank 10 ft downstream from bridge on State Highway 14, 1 mi upstream from Walnut Creek, 3.2 mi southeast of Deweese, and 6 mi northwest of Angus.

DRAINAGE AREA.--979 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1953 to September 1972, October 1974 to current year.

REVISED RECORDS.--WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,632.67 ft National Geodetic Vertical Datum of 1929. Prior to May 16, 1957, non-recording gage and Oct. 1, 1974, to Mar. 24, 1981, at present site and datum; May 16, 1957, to Sept. 30, 1972, and Mar. 25, 1981 to Mar. 24, 1982, at site 1,500 ft upstream from bridge at present datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--29 years (water years 1954-72, 1975-84), 147 ft^3/s, 106,500 acre-ft/yr; median of yearly mean discharges, 126 ft^3/s, 91,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,100 ft^3/s Aug. 31, 1969, gage height, 18.57 ft; minimum daily, 6.3 ft^3/s Sept. 7, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 26, 1951, reached a stage of 14.9 ft, from information by local residents, discharge, 16,000 ft^3/s, based on records for former station at Angus.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 29	----	1850	ice jam	May 8	0200	1740	5.53
Apr. 3	1200	2890	6.90	May 20	0230	*6630	10.80
Apr. 22	1330	4810	8.93	May 22	1200	2940	7.54
Apr. 30	1230	2360	6.30	June 13	1000	2440	6.94

Minimum daily discharge, 30 ft^3/s Nov. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	876	62	58	68	891	96	174	1270	172	110	93	83
2	317	62	52	66	796	94	453	672	166	106	95	92
3	178	65	60	70	585	95	2480	780	148	101	108	90
4	145	64	58	100	449	162	1700	972	148	116	113	67
5	115	65	60	110	338	230	985	488	257	180	117	53
6	104	98	60	116	199	174	530	313	285	281	114	45
7	99	81	54	110	207	164	314	1150	190	216	96	41
8	88	73	64	100	180	128	246	1460	142	153	92	38
9	80	73	66	92	153	110	206	734	131	130	97	34
10	83	77	62	82	159	109	186	395	139	112	99	33
11	102	81	58	94	161	106	175	274	128	100	110	34
12	75	77	58	85	138	101	179	236	376	97	116	35
13	68	69	56	70	131	98	200	214	2130	96	103	34
14	65	63	54	110	118	96	198	194	1240	98	95	31
15	65	58	50	100	114	94	167	179	706	101	86	32
16	61	54	46	94	107	90	150	171	338	107	85	33
17	59	54	45	88	101	92	141	166	416	107	88	33
18	58	52	45	86	107	83	133	245	351	104	89	33
19	61	64	40	90	97	72	125	3760	251	103	91	33
20	62	83	45	88	96	90	128	6100	264	96	89	33
21	60	73	42	90	95	104	983	2330	201	94	92	33
22	60	69	45	96	95	121	4410	2270	173	101	87	34
23	59	68	49	100	96	131	3150	1530	147	107	76	37
24	58	58	47	106	97	126	1380	850	129	106	67	35
25	58	55	55	110	99	155	651	537	204	108	65	35
26	58	54	60	120	103	354	370	404	332	110	68	35
27	59	30	64	140	103	822	282	313	242	110	71	38
28	59	48	68	190	100	604	227	253	165	111	67	38
29	58	52	66	1100	95	333	429	261	138	115	65	38
30	59	56	60	1500	---	223	2110	204	117	111	70	40
31	60	---	60	1040	---	196	---	191	---	95	84	---
TOTAL	3409	1938	1717	6411	6010	5453	22862	28916	9826	3684	2788	1270
MEAN	110	64.6	55.4	207	207	176	762	933	328	119	89.9	42.3
MAX	876	98	68	1500	891	822	4410	6100	2130	281	117	92
MIN	58	30	40	66	95	72	125	166	117	94	65	31
AC-FT	6760	3840	3410	12720	11920	10820	45350	57350	19490	7310	5530	2520

CAL YR 1983	TOTAL	46286	MEAN	127	MAX	3150	MIN	24	AC-FT	91810
WTR YR 1984	TOTAL	94284	MEAN	258	MAX	6100	MIN	30	AC-FT	187000

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-70, 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1979 to September 1981.
WATER TEMPERATURES: February 1979 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 508 micromhos Feb. 14, 1980; minimum daily, 82 micromhos May 4, 1979.
WATER TEMPERATURES: Maximum, 28.0°C Aug. 8, 9, 10, 1980; minimum, 1.0°C Jan. 29, 30, 31, Feb. 1, 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT											
05...	1650	118	265	8.2	19.0	7.6	40	7500	11000	110	34
NOV											
09...	1615	74	--	--	5.0	9.5	29	1200	5400	190	59
DEC											
08...	1345	63	395	7.4	.5	10.4	18	K28	160	220	69
JAN											
11...	1445	116	415	7.5	.5	13.2	27	290	K12000	160	50
FEB											
08...	1530	183	300	7.6	5.5	10.3	42	K470	K160000	110	33
MAR											
14...	1045	96	465	7.6	6.5	9.8	21	1500	600	210	64
APR											
04...	1230	1630	--	7.3	4.5	9.4	170	5300	8400	36	10
MAY											
09...	1615	696	--	7.5	13.5	6.5	130	57000	7800	48	14
JUN											
13...	1945	1890	128	6.8	23.0	6.4	380	60000	K120000	30	8.7
JUL											
11...	1420	100	415	7.6	27.5	7.7	140	--	1400	170	53
AUG											
08...	1145	89	455	7.8	25.0	8.5	120	K15000	1100	260	68
SEP											
05...	1200	52	455	7.3	19.5	7.9	30	3000	960	200	60

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
05...	6.5	22	7.5	344	.70	.070	2.0	2.1	2.8	.520	10
NOV											
09...	9.3	30	10	72	1.1	.100	1.2	1.3	2.4	.370	4.7
DEC											
08...	12	32	12	9	1.3	.060	.44	.50	1.8	.240	1.5
JAN											
11...	9.4	29	13	219	1.3	.210	.69	.90	2.2	.510	5.5
FEB											
08...	6.5	20	8.3	240	1.3	.450	1.2	1.6	2.9	.600	12
MAR											
14...	11	37	14	100	1.5	.190	.81	1.0	2.5	.340	4.7
APR											
04...	2.7	16	6.4	3290	.70	.450	7.1	7.5	8.2	1.90	57
MAY											
09...	3.2	11	5.2	1750	.90	.900	5.1	6.0	6.9	2.80	49
JUN											
13...	2.1	13	2.9	4760	1.9	.220	9.8	10	12	3.00	130
JUL											
11...	9.7	31	10	336	1.9	.010	4.0	4.0	5.9	.550	11
AUG											
08...	23	200	26	120	.80	.090	1.4	1.5	2.3	.550	9.1
SEP											
05...	11	35	11	100	.90	.070	1.0	1.1	2.0	.470	7.2

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
NOV										
09...	1415	11	15	.5	8.1	175	.30	29	270	.36
FEB										
08...	1530	0	9.1	.4	13	111	.30	19	180	.24
MAY										
09...	1415	0	4.5	.3	11	50	.20	12	91	.12
AUG										
08...	1145	70	75	2	11	195	.50	22	540	.74

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01[illegible])	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
NOV										
09...	53	1.1	.260	5	<100	30	<1	10	8	4100
FEB										
08...	87	1.2	.340	--	--	20	--	--	--	--
MAY										
09...	172	.81	.350	12	700	20	<1	40	41	53000
AUG										
08...	130	.46	.020	--	--	130	--	--	--	--

DATE	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV										
09...	4100	23	4	160	110	52	.1	2	1	20
FEB										
08...	--	230	--	--	--	14	--	--	--	--
MAY										
09...	53000	190	45	570	570	3	.1	<1	<1	270
AUG										
08...	--	16	--	--	--	<1	--	--	--	--

06883570 LITTLE BLUE RIVER NEAR ALEXANDRIA, NE

LOCATION (REVISED).--Lat 40°12'25", long 97°23'18", in SE1/4SE1/4 sec.23, T.3 N., R.1 W., Thayer County, Hydrologic Unit 10270206, on left bank 10 ft upstream from bridge on State Highway 53, 2.7 mi south of Alexandria, 9.8 mi downstream from Dry Creek, and 5.7 mi upstream from Big Sandy Creek.

DRAINAGE AREA.--1,557 mi^2.

PERIOD OF RECORD.--July 1959 to September 1972 (published as "near Gilead"), April 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,359.29 ft National Geodetic Vertical Datum of 1929. July 1959 to Sept. 30, 1972, at site 2.3 mi upstream at datum 12.0 ft higher. Apr. 23, 1974 to Aug. 7, 1984, at site 750 ft upstream at same datum.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--23 years (water years 1960-72, 1975-84), 242 ft^3/s, 175,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft^3/s Mar. 28, 1960, gage height, 17.30 ft, site and datum then in use; maximum gage height, 18.93 ft July 4, 1982; minimum daily discharge, 2.9 ft^3/s Aug. 9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 29	----	2440	ice jam	May 21	1900	6000	15.13
Apr. 4	0500	3200	12.62	June 9	1800	5420	14.66
Apr. 23	1200	4980	14.29	June 12	1300	*9930	17.52
May 1	0800	2530	11.84	June 17	1200	2490	11.79

Minimum daily discharge, 42 ft^3/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4660	118	94	140	1500	172	314	2290	396	213	156	72
2	1320	118	100	150	1290	169	614	1410	384	209	147	115
3	702	125	96	155	1090	166	2120	994	352	210	139	118
4	416	152	100	160	860	202	2740	941	370	208	139	110
5	307	250	108	160	649	196	1630	1080	348	206	142	101
6	245	188	110	170	479	317	1100	781	553	194	140	83
7	198	153	110	180	390	350	757	597	502	263	149	68
8	174	157	118	200	356	260	551	1080	379	271	135	66
9	155	173	120	220	335	230	427	1370	3460	226	123	61
10	160	199	112	250	296	193	362	924	2980	214	120	56
11	264	212	116	230	278	188	320	671	1250	189	125	51
12	490	202	110	210	262	186	308	527	5930	181	131	50
13	320	172	100	200	250	184	289	443	5100	188	134	53
14	181	151	90	180	235	174	302	383	3080	176	133	49
15	144	135	84	150	220	170	308	346	2620	167	125	46
16	130	126	74	160	210	165	277	323	2020	164	104	45
17	125	120	66	145	204	172	255	299	1950	174	111	44
18	123	119	70	135	209	174	244	300	1310	163	110	44
19	131	119	60	130	206	136	235	1310	878	163	107	44
20	126	169	66	120	191	158	238	4300	649	164	110	43
21	133	286	70	130	182	261	460	5650	820	171	115	43
22	128	231	66	135	179	342	2050	3840	759	155	122	42
23	125	166	74	145	179	374	4690	3060	500	161	112	44
24	120	147	84	160	184	333	2840	1960	439	153	103	44
25	118	138	90	180	188	283	1440	1420	381	153	94	43
26	115	132	98	195	203	312	915	1060	327	144	87	43
27	112	116	110	240	193	477	634	842	402	152	79	47
28	110	61	120	350	190	919	497	692	314	152	70	55
29	113	80	112	1000	185	763	585	548	261	152	70	68
30	117	90	120	2000	---	528	1350	486	233	151	68	71
31	115	---	130	1700	---	387	---	431	---	148	65	---
TOTAL	11677	4605	2978	9680	11193	8941	28852	40358	38947	5635	3565	1819
MEAN	377	154	96.1	312	386	288	962	1302	1298	182	115	60.6
MAX	4660	286	130	2000	1500	919	4690	5650	5930	271	156	118
MIN	110	61	60	120	179	136	235	299	233	144	65	42
AC-FT	23160	9130	5910	19200	22200	17730	57230	80050	77250	[illegible]180	7070	3610

CAL YR 1983 TOTAL 96887 MEAN 265 MAX 7670 MIN 28 AC-FT 192200
WTR YR 1984 TOTAL 168250 MEAN 460 MAX 5930 MIN 42 AC-FT 333700

06883940 BIG SANDY CREEK AT ALEXANDRIA, NE

LOCATION.--Lat 40°14'06", long 97°23'20", in SE1/4SE1/4 sec.11, T.3 N., R.1 W., Thayer County, Hydrologic Unit 10270206, on right bank 15 ft upstream from bridge on State Highway 53, 0.8 mi south of Alexandria.

DRAINAGE AREA.--607 mi^2.

PERIOD OF RECORD.--October 1979 to current year.

REVISED RECORDS.--WRD NE-82-1: 1981(M).

GAGE.--Water stage recorder. Altitude of gage is 1,395 ft from topographic map.

REMARKS.--Records good. Natural flow of stream affected by ground-water withdrawals and return flow from irrigated areas.

AVERAGE DISCHARGE.--5 years, 131 ft^3/s, 94,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,900 ft^3/s June 13, 1984, gage height, 16.71 ft; minimum daily, 16 ft^3/s Apr. 6, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 11	1800	4740	12.61	May 19	1030	2100	8.95
Jan. 29	2200	2030	9.01	May 22	0730	1720	8.28
Feb. 2	0130	1510	8.08	June 5	1200	3780	11.24
Apr. 2	2330	2610	9.80	June 9	1330	4160	11.67
Apr. 21	1530	2000	8.84	June 13	0700	*21900	16.71
Apr. 29	2300	869	6.60				

Minimum daily discharge, 25 ft^3/s Jan. 13-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	45	33	27	1090	62	70	353	62	75	106	93
2	520	44	33	27	1290	59	1100	259	68	73	117	121
3	257	46	32	27	1090	65	1810	198	173	71	119	116
4	182	44	32	27	826	114	960	157	89	76	120	85
5	145	42	31	28	579	83	417	122	2460	89	114	68
6	115	41	30	28	271	63	243	100	1670	85	107	54
7	96	40	30	28	250	67	163	84	343	101	103	46
8	84	38	29	28	255	59	115	79	144	109	103	47
9	74	48	28	28	250	52	87	73	2300	87	118	45
10	71	66	28	27	174	54	73	73	750	85	117	43
11	2880	57	29	27	164	54	70	70	130	91	116	43
12	2060	54	28	26	151	48	70	68	4130	86	99	40
13	909	49	28	25	115	51	62	65	14100	89	95	38
14	395	47	28	25	105	49	59	61	5900	94	94	37
15	204	41	28	25	89	46	56	59	4440	90	98	39
16	139	38	27	25	74	43	56	57	4040	90	98	37
17	111	37	28	25	65	45	52	56	3040	99	105	36
18	98	35	27	25	64	43	48	63	1420	105	102	36
19	82	34	27	25	55	34	47	1340	722	113	101	35
20	80	34	27	25	53	48	47	579	516	121	100	33
21	76	35	28	25	53	80	1110	378	439	125	106	32
22	69	46	27	25	54	263	1270	1250	392	127	98	32
23	65	63	26	25	54	168	954	789	283	106	90	32
24	61	55	26	25	57	117	594	375	161	100	86	30
25	58	47	26	25	57	124	497	285	117	111	82	30
26	55	41	26	25	57	197	277	182	96	119	84	29
27	52	36	26	26	58	208	141	113	81	125	71	29
28	49	33	26	248	59	155	97	83	78	129	71	35
29	48	32	26	1250	61	137	297	70	77	120	76	36
30	46	33	26	1260	---	106	553	66	76	107	78	38
31	45	---	26	979	---	83	---	63	---	106	83	---
TOTAL	10426	1301	872	4441	7520	2777	11395	7570	48297	3104	3057	1415
MEAN	336	43.4	28.1	143	259	89.6	380	244	1610	100	98.6	47.2
MAX	2880	66	33	1260	1290	263	1810	1340	14100	129	120	121
MIN	45	32	26	25	53	34	47	56	62	71	71	29
AC-FT	20680	2580	1730	8810	14920	5510	22600	15020	95800	6160	6060	2810

CAL YR 1983 TOTAL 52194 MEAN 143 MAX 8340 MIN 19 AC-FT 103500
WTR YR 1984 TOTAL 102175 MEAN 279 MAX 14100 MIN 25 AC-FT 202700

06884000 LITTLE BLUE RIVER NEAR FAIRBURY, NE

LOCATION.--Lat 40°06'54", long 97°10'13", in NW1/4NE1/4 sec.26, T.2 N., R.2 E., Jefferson County, Hydrologic Unit 10270207, at right downstream wingwall of bridge on State Highway 15, 0.8 mi south of Fairbury, and 5.2 mi upstream from Rose Creek.

DRAINAGE AREA.--2,350 mi².

PERIOD OF RECORD.--May 1908 to September 1915, October 1928 to September 1956 (published as "near Endicott"), October 1956 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1086: 1941(M). WSP 1390: 1908(M), 1912, 1915, 1935, 1939, 1945(M). WSP 1510: 1947 (calendar year figures only). WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,282.19 ft National Geodetic Vertical Datum of 1929. May 23, 1908, to Sept. 30, 1915, nonrecording gage at present site at different datum. Apr. 26, 1929, to Sept. 24, 1957, nonrecording gage or water-stage recorder at site 3.5 mi downstream at various datums.

REMARKS.--Records good except those for winter period, which are poor. Some regulation at low stage by thermoelectric plant above station. Natural flow of stream affected by irrigation development above station.

AVERAGE DISCHARGE.--63 years, 377 ft³/s, 273,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,900 ft³/s June 13, 1984, gage height, 16.98 ft; maximum gage height, 18.96 ft Oct. 12, 1973; minimum daily discharge, 14 ft³/s Nov. 22, 1929, discharge measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 12	0130	5950	8.50	May 22	0930	7830	9.74
Jan. 30	----	4500	ice jam	June 5	2330	6560	8.92
Apr. 3	1500	5720	8.33	June 9	2400	9510	10.73
Apr. 23	1700	6500	8.88	June 13	1400	*41900	16.98
May 1	1000	3350	6.39				

Minimum daily discharge, 83 ft³/s Sept. 22, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9340	208	140	175	2700	300	458	3120	476	402	273	137
2	2830	203	150	180	2400	295	1650	2030	454	385	274	185
3	1330	206	145	185	2000	295	5440	1370	481	356	275	214
4	824	207	140	190	1500	327	4640	1080	479	330	270	184
5	608	247	150	195	1000	383	2630	1300	2350	383	267	156
6	506	262	155	200	894	382	1740	980	3970	356	261	135
7	440	222	160	210	847	410	1180	758	1330	746	248	118
8	392	220	160	220	772	362	862	851	753	881	240	112
9	362	244	170	230	702	336	673	1550	5490	493	246	106
10	344	296	165	240	595	308	565	1070	6320	395	245	101
11	2200	302	165	245	527	300	523	750	1730	364	252	98
12	3730	287	160	240	516	294	591	576	9650	335	249	97
13	1670	256	145	220	440	294	498	490	31600	319	224	105
14	824	233	130	200	393	285	477	449	14600	289	241	96
15	506	217	110	180	371	279	467	414	8360	280	216	92
16	392	207	105	185	352	272	432	392	7700	283	185	92
17	339	200	94	170	341	283	389	385	6690	292	194	90
18	303	194	105	160	344	269	368	396	3840	292	194	89
19	292	189	100	165	334	210	342	2450	2110	301	193	89
20	276	189	110	145	320	306	350	5240	1470	302	197	87
21	260	254	120	160	313	367	1740	6260	1310	313	205	84
22	252	275	115	165	314	711	3890	6670	1510	320	218	83
23	245	251	120	175	309	658	6210	4600	992	313	204	84
24	242	241	130	190	313	551	4360	2800	765	298	187	84
25	243	224	135	200	312	473	2350	2000	647	297	169	83
26	235	213	150	220	323	500	1550	1290	568	304	158	86
27	229	185	160	250	310	726	965	920	632	318	151	87
28	223	139	150	600	311	1030	714	761	633	319	139	90
29	219	150	165	2250	304	976	1020	670	548	318	135	94
30	216	150	160	3500	---	696	2200	571	457	296	132	94
31	213	---	170	3200	---	535	---	531	---	275	129	---
TOTAL	30085	6671	4334	148[illegible]	20157	13413	49284	52724	117915	11155	6571	3252
MEAN	970	222	140	47[illegible]	695	433	1643	1701	3931	360	212	108
MAX	9340	302	170	3500	2700	1030	6210	6670	31600	881	275	214
MIN	213	139	94	145	304	210	342	385	454	275	129	83
AC-FT	59670	13230	8600	29450	39980	26600	97750	104600	233900	22130	13030	6450

CAL YR 1983 TOTAL 176088 MEAN 482 MAX 17800 MIN 79 AC-FT 349300
WTR YR 1984 TOTAL 330406 MEAN 903 MAX 31600 MIN 83 AC-FT 655400

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS

LOCATION.--Lat 39°58'48", long 97°00'16", NE1/4SW1/4 sec.8, T.1 S., R.4 E., Washington County, Hydrologic Unit 10270207, on right bank and 2 ft downstream from bridge on county road, 0.6 mi west of Hollenberg, and 1.75 mi downstream from Nebraska-Kansas State line.

DRAINAGE AREA.--2,752 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1973 to February 1974 (discharge measurements only), March 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,216.10 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Discharge measurements made prior to 1974 water year are published in table of miscellaneous sites in WDR NE-73.

AVERAGE DISCHARGE.--10 years, 531 ft³/s, 384,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,600 ft³/s June 13, 1984, gage height, 21.00 ft; minimum daily, 40 ft³/s Dec. 17, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1973, reached a stage of 23.07 ft, present datum, from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 12	0730	5280	9.75	May 22	1700	7680	11.47
Jan. 30	----	5200	ice jam	June 6	0600	6280	10.50
Apr. 3	0700	7400	11.28	June 10	0930	10700	13.32
Apr. 23	1800	6680	10.79	June 13	2030	*36600	21.00
May 1	1400	4210	8.87	June 22	1800	4480	8.78

Minimum daily discharge, 100 ft³/s Sept. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13700	225	180	220	3500	313	646	3860	715	585	314	169
2	4000	222	185	230	3000	307	2010	2770	762	542	313	218
3	1850	239	185	240	2700	304	6960	1860	723	525	311	263
4	1160	241	190	250	2000	342	6150	1460	868	509	310	264
5	810	257	185	255	1880	405	3580	1560	1170	522	308	229
6	639	334	190	260	1100	413	2270	1400	4800	550	308	199
7	545	285	195	270	891	457	1590	1110	1880	748	306	165
8	475	254	195	280	987	408	1210	930	1080	1660	300	155
9	429	303	200	290	809	371	972	1720	4080	837	289	145
10	409	334	200	295	713	331	815	1510	8860	573	281	138
11	995	390	195	300	620	305	714	1080	3350	495	276	134
12	4120	382	185	300	599	305	809	856	4480	454	273	130
13	2170	356	175	290	558	304	730	745	25500	421	267	139
14	1170	303	160	280	502	329	657	663	23800	406	257	137
15	689	276	145	270	462	312	629	615	10600	393	247	124
16	505	254	125	260	428	297	590	585	8000	377	242	120
17	423	238	130	250	394	323	546	551	6450	387	234	116
18	360	227	135	240	382	329	504	539	4710	380	225	117
19	334	221	140	230	377	275	476	2370	2810	383	219	118
20	317	217	145	220	347	295	464	5480	1960	370	215	116
21	306	250	145	230	330	583	1670	5450	1860	371	228	111
22	296	335	150	250	320	990	4120	6940	4070	373	246	109
23	280	309	155	270	311	1170	6140	5250	2310	363	261	109
24	273	281	160	340	313	968	5090	3550	1340	350	249	105
25	286	263	175	300	318	731	2850	2600	1010	343	236	100
26	267	246	180	250	341	720	1920	2050	850	345	220	103
27	250	247	185	400	340	930	1330	1460	799	345	205	110
28	240	183	200	600	328	1140	972	1170	928	345	190	113
29	231	179	205	2000	319	1350	1450	1030	777	345	171	119
30	230	170	205	4000	---	1020	3350	874	657	336	166	126
31	229	---	210	4000	---	789	---	784	---	317	166	---
TOTAL	37978	8021	5410	17870	25169	17116	61214	63822	131199	14950	7833	4301
MEAN	1225	267	175	576	868	552	2040	2059	4373	482	253	143
MAX	13700	390	210	4000	3500	1350	6960	6940	25500	1660	314	264
MIN	229	170	125	220	311	275	464	539	657	317	166	100
AC-FT	75330	15910	10730	35450	49920	33950	121400	126600	260200	29650	15540	8530

CAL YR 1983 TOTAL 219453 MEAN 601 MAX 14800 MIN 90 AC-FT 435300
WTR YR 1984 TOTAL 394883 MEAN 1079 MAX 25500 MIN 100 AC-FT 783300

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06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CACO3) (00900)
OCT 25...	1530	290	570	7.8	12.0	11.7	22	10000	1200	190
NOV 16...	1535	251	--	8.0	6.0	11.8	28	6200	5800	100
DEC 16...	1015	125	620	7.9	.0	14.5	15	3000	920	240
JAN 11...	1100	303	552	7.8	.0	13.7	17	2700	16000	200
FEB 08...	1630	912	265	7.4	.0	15.8	67	K850	12000	87
MAR 06...	1630	398	504	7.8	6.0	12.4	55	K670	11000	180
APR 11...	1200	719	488	8.0	11.0	10.4	39	700	2100	180
MAY 10...	1500	1370	262	7.5	17.0	9.3	150	2500	2500	89
JUN 07...	1130	1820	230	7.4	23.0	7.0	190	9700	7800	66
JUL 09...	1245	654	304	7.6	25.5	7.5	120	3900	15000	120
AUG 29...	1000	173	530	7.7	25.0	8.7	40	K170	2900	200
SEP 25...	1630	102	615	8.6	17.0	12.2	20	K56	820	200

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT 25...	2	60	9.7	34	1	9.2	198	42	33
NOV 16...	10	57	10	33	1	10	174	40	34
DEC 16...	10	76	12	46	1	6.7	235	54	49
JAN 11...	6	65	10	31	1	5.7	198	38	28
FEB 08...	0	27	4.7	11	.5	13	90	23	12
MAR 06...	10	55	9.3	26	.9	10	166	54	23
APR 11...	6	56	8.7	24	.8	10	170	47	24
MAY 10...	6	28	4.7	11	.5	10	83	26	11
JUN 07...	13	20	3.9	8.0	.4	9.5	53	26	7.2
JUL 09...	23	38	5.9	15	.6	9.8	96	29	11
AUG 29...	0	60	11	43	1	9.0	203	46	41
SEP 25...	0	62	11	52	2	7.2	207	51	54

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
OCT									
25...	.30	25	330	.44	255	85	1.6	1.6	.190
NOV									
16...	.30	25	310	.43	212	119	1.6	1.6	.180
DEC									
16...	.30	30	420	.57	141	14	2.1	2.1	.240
JAN									
11...	.30	25	320	.44	264	44	1.7	1.7	.180
FEB									
08...	.20	16	160	.22	392	552	1.4	1.4	.790
MAR									
06...	.30	19	300	.40	318	394	1.6	1.6	.570
APR									
11...	.30	17	290	.39	561	448	1.7	1.6	.350
MAY									
10...	.30	12	150	.21	566	2250	1.5	1.4	.050
JUN									
07...	.30	12	120	.16	586	1980	2.7	2.7	.030
JUL									
09...	.40	15	180	.25	321	3490	2.5	2.4	.050
AUG									
29...	.40	20	350	.48	165	67	.40	.38	.030
SEP									
25...	.40	17	380	.52	104	2	.50	.50	.020

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT									
25...	1.1	1.3	2.9	.420	.300	50	13	31	5.4
NOV									
16...	1.4	1.6	3.2	.450	.320	50	90	50	6.1
DEC									
16...	.26	.50	2.6	.280	.240	60	9	100	2.8
JAN									
11...	.52	.70	2.4	.320	.240	40	28	45	3.8
FEB									
08...	2.7	3.5	4.9	.730	.350	20	300	33	19
MAR									
06...	2.2	2.8	4.4	.550	.260	30	140	17	16
APR									
11...	2.7	3.0	4.7	.800	.210	30	13	8	11
MAY									
10...	6.5	6.5	8.0	2.90	.260	30	81	6	56
JUN									
07...	7.5	7.5	10	1.50	.270	30	430	21	70
JUL									
09...	6.0	6.0	8.5	.900	.170	40	35	1	37
AUG									
29...	.37	.40	.80	.410	.200	60	6	4	9.4
SEP									
25...	.28	.30	.80	.220	.180	70	10	74	2.8

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) (01044)
NOV								
16...	1535	4	200	1	<10	11	4100	4000
FEB								
08...	1630	5	400	<1	20	<1	16000	16000
MAY								
10...	1500	13	900	<1	40	47	59000	59000
AUG								
29...	1000	6	200	<1	<10	6	2600	--

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) (01054)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV							
16...	4	150	100	.1	2	<1	30
FEB							
08...	<1	320	290	<.1	<1	<1	70
MAY							
10...	59	990	990	<.1	<1	<1	260
AUG							
29...	<1	300	--	<.1	2	<1	20

DISCHARGE AT PARTIAL RECORD STATIONS AND MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations are given in the following table. Some measurements were made during periods of base flow when streamflow is primarily from ground-water storage and may be correlated with the simultaneous discharge of a nearby stream where continuous records are available to give a picture of the low-flow potentiality of the stream.

Discharge measurements made at miscellaneous sites during water year 1984

Stream	Tributary to	Location	Drainage area (mi²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft³/s)
		Niobrara River basin				
Plum Creek [1] (06462450)	Niobrara River	Lat 42°38'08", long 100°06'22", in NW1/4SW1/4 sec.14, T.30 N., R.24 W., Brown County, at bridge on U.S. Highway 20, 2 miles west of Johnstown.	--	1969-73 1978-83	10-05-83 06-12-84 07-24-84	29 78 82
Plum Creek [1] (06462470)	Niobrara River	Lat 42°40'01", long 100°03'26", in SE1/4SE1/4 sec.7, T.31 N., R.23 W., Brown County, at county road bridge 0.2 mile upstream from Sand Draw and 6.5 miles north of Johnstown.	--	1969-73 1978-83	10-05-83 06-13-84 07-24-84	90 252 143
Long Pine Creek [1] (06463050)	Niobrara River	Lat 42°32'59", long 99°42'23", in NE1/4NW1/4 sec.30, T.30 N., R.20 W., Brown County, at timber bridge 0.1 mile downstream from bridge on U.S. Highway 20 and 0.9 mile northwest of Long Pine.	--	1978-83	10-06-83 06-13-84 07-26-84	55 60 75
Bone Creek [1] (06463090)	Long Pine Creek	Lat 42°32'51", long 99°52'33", in NE1/4NE1/4 sec.27, T.30 N., R.22 W., Brown County, at bridge on U.S. Highway 20, 0.6 mile west of junction of highways 7 and 20 in Ainsworth.	--	1969-73 1978-83	10-06-83 06-14-84 07-25-84	3.5 5.5 33
Sand Draw [1] (06463290)	Bone Creek	Lat 42°34'08", long 99°58'08", in NE1/4NE1/4 sec.14, T.30 N., R.23 W., Brown County, at bridge on county road 4.5 miles east and 0.7 mile north of Johnstown.	--	1978-83	10-05-83 06-13-84 07-25-84	2.5 3.6 29
Sand Draw [1] (06463310)	Bone Creek	Lat 42°38'10", long 99°51'10", in NE1/4NE1/4 sec.26, T.31 N., R.22 W., Brown County, at bridge on county road 8.6 miles south of Meadville and about 4.5 miles upstream from Bone Creek.	--	1978-83	10-06-83 06-13-84 07-25-84	9.7 18 96
Bone Creek [1] (06463350)	Long Pine Creek	Lat 42°40'16", long 99°46'06", in NE1/4SW1/4 sec.10, T.31 N., R.21 W., Brown County, at bridge on U.S. Highway 183, 2.8 miles west and 8.4 miles north of Long Pine.	--	1969-73 1978-83	10-06-83 06-13-84 07-26-84	42 100 a472
Eagle Creek [1] (06465050)	Niobrara River	Lat 42°38'01", long 98°46'21", in SW1/4NW1/4 sec.30, T.31 N., R.12 W., Holt County, at county road bridge 4.3 miles south and 6 miles west of Midway.	--	1969-83	11-08-83 04-25-84	22 39
East Branch Eagle Creek [1] (06465100)	Eagle Creek	Lat 42°37'35", long 98°45'49", in SW1/4SE1/4 sec.30, T.31 N., R.12 W., Holt County, at county road bridge 5 miles south and 5.4 miles west of Midway.	--	1969-83	11-08-83 04-25-84	8.7 18
Redbird Creek [1] (06465398)	Niobrara River	Lat 42°39'33", long 98°33'31", in NE1/4SE1/4 sec.14, T.31 N., R.11 W., Holt County, at site 3.2 miles east and 2.7 miles south of Meek.	--	1969-83	11-08-83 04-25-84	63 35
Blackbird Creek [1] (06465420)	Redbird Creek	Lat 42°39'46", long 98°38'24", in SW1/4NW1/4 sec.14, T.31 N., R.11 W., Holt County, at county road bridge 2.4 miles east and 2.3 miles south of Meek.	--	1969-83	11-08-83 04-25-84	9.3 20

See footnotes at end of table

Discharge measurements made at miscellaneous sites during water year 1984--Continued

Stream	Tributary to	Location	Drainage area (mi²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft³/s)
		Platte River basin				
Dane Creek † (06788495)	North Loup River	Lat 98°54'01", long 41°36'31", in NE1/4NE1/4 sec.20, T.19 N., R.14 W., Valley County, at bridge on State Highway 11 at northwest edge of Ord.	--	1962b 1977-83	11-09-83 04-27-84	.59 1.0
Myra Creek † (06788990)	North Loup River	Lat 41°29'58", long 98°46'46", in SE1/4SW1/4 sec.26, T.18 N., R.13 W., Valley County, at bridge on State Highway 11 at west edge of North Loup.	--	1977-83	11-09-83 04-27-84	1.3 7.9
Salt Creek † (06803525)	Platte River	Lat 40°54'18", long 96°35'09", in NW1/4SW1/4 sec.24, T.11 N., R.7 E., Lancaster County, at bridge 0.5 mile north of Interstate Highway 80 and 3 miles southwest of Waverly.	815	1971-83	06-05-84	2190
		Kansas River basin				
Turkey Creek (06850000) *	Republican River	Lat 40°04'34", long 99°08'17", in SW1/4SW1/4 sec.4, T.1 N., R.16 W., Franklin County, at county road bridge at east side of Naponee, 0.8 mile upstream from mouth.	129	1948-53#, 1954-60b, 1961-81, 1983	04-19-84	14

* Also a crest-stage gage.
# Operated as a continuous-record gaging station.
† Also published with additional data elsewhere in this report.
a Estimate.
b Gage heights, or gage heights and discharge measurements only.

DISCHARGE AT PARTIAL RECORD STATIONS AND MISCELLANEOUS SITES

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest stage partial record stations during water year 1984

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Tekamah Creek basin					
06601000	Tekamah Creek at Tekamah, NE	Lat 41°46'30", long 96°13'10" in SE1/4 sec.19, T.21 N., R.11 E., Burt County, on left bank upstream from bridge, 1 block east of U.S. Highway 73 in Tekamah.	23	#1949-81 1983-84	06-16-84	13.93	4,160
		Kansas River basin					
06838200	Coon Creek at Indianola, NE	Lat 40°14'03", long 100°25'37", in NW1/4NE1/4 sec.13, T.3 N., R.28 W., Red Willow County, at bridge on U.S. Highways 6 and 34, 0.5 mile west of Indianola.	a69	1961-84	07-04-84	2.78	10
06838550	Dry Creek at Bartley, NE	Lat 40°15'02", long 100°19'02", in SW1/4SE1/4 sec.1, T.3 N., R.27 W., Red Willow County, at bridge on U.S. Highway 6 and 34, 0.5 mile west of Bartley.	a42	1961-84	08-30-84	--	<5
06850000	Turkey Creek at Naponee, NE	Lat 40°04'34", long 99°08'17", in SW1/4SW1/4 sec.4, T.1 N., R.16 W., Franklin County, on downstream side of county bridge at east side of Naponee.	129	1948-53#, 1958-61b 1962-77c 1978-84b	04-03-84	2.13	70
06881450	Indian Creek at Beatrice, NE	Lat 40°17'08", long 96°44'47", in SE1/4NE1/4 sec.28, T.4 N., R.6 E., Gage County, at bridge on U.S. Highway 77 at north edge of Beatrice.	74.7	1960-84	04-03-84	12.16	2,080

# Operated as a continuous-record gaging station.
a Approximate.
b Discharge measurements published in table for miscellaneous sites.
c Discharge measurements published in table for low flow partial record sites.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)
NIOBRARA RIVER BASIN											
06459350 - AINSWORTH CANAL NR JOHNSTOWN NE (LAT 42 33 30 LONG 100 05 14)											
JUN , 1984											
12...	1550	60	163	8.5	23.0	66	0	21	3.3	6.8	.4
JUL											
24...	1550	385	164	8.3	22.5	63	0	20	3.1	6.2	.4
0646245C - PLUM CREEK AT JOHNSTOWN, NEBR (LAT 42 34 08 LONG 100 06 22)											
OCT , 1983											
05...	1500	29	186	7.5	15.0	69	0	22	3.3	7.1	.4
JUN , 1984											
12...	1625	78	214	7.7	22.0	81	0	25	4.5	11	.6
JUL											
24...	1515	82	178	7.4	21.0	69	0	22	3.4	7.2	.4
06462470 - PLUM CREEK NEAR JOHNSTOWN, NEBR (LAT 42 40 01 LONG 100 03 26)											
OCT , 1983											
05...	1600	90	190	7.4	15.5	74	0	24	3.5	7.3	.4
JUN , 1984											
13...	0820	252	234	7.8	19.0	98	0	31	5.1	12	.5
JUL											
24...	1630	143	198	7.4	22.0	78	0	25	3.9	9.3	.5

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
06459350 - AINSWORTH CANAL NR JOHNSTOWN NE (LAT 42 33 30 LONG 100 05 14)										
JUN , 1984										
12...	5.4	81	11	1.2	.40	43	140	.19	23	<.10
JUL										
24...	4.7	72	8.1	1.0	.30	45	130	.18	208	.39
0646245C - PLUM CREEK AT JOHNSTOWN, NEBR (LAT 42 34 08 LONG 100 06 22)										
OCT , 1983										
05...	7.0	79	6.9	3.1	.30	51	150	.20	12	1.4
JUN , 1984										
12...	6.7	107	8.1	1.8	.50	37	160	.22	33	.86
JUL										
24...	5.4	76	14	2.0	.40	45	140	.20	32	.89
06462470 - PLUM CREEK NEAR JOHNSTOWN, NEBR (LAT 42 40 01 LONG 100 03 26)										
OCT , 1983										
05...	6.1	86	6.0	2.1	.30	55	160	.21	38	1.0
JUN , 1984										
13...	7.8	115	7.4	1.9	.60	38	170	.23	118	.44
JUL										
24...	6.1	91	8.0	1.8	.40	47	160	.21	60	.78

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

NIOBRARA RIVER BASIN--Continued

06463050 - LONG PINE CREEK AT LONG PINE, NEBR. (LAT 42 32 59 LONG 099 42 23)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)
OCT , 1983 06...	1630	55	136	7.9	15.5	47	0	15	2.2	5.5	.4
JUN , 1984 13...	1630	60	135	7.7	19.5	52	0	17	2.3	5.5	.3
JUL 26...	1010	75	122	7.6	16.5	43	0	14	2.0	5.2	.4

06463090 - BONE CREEK AT AINSWORTH, NEBR (LAT 42 32 51 LONG 099 52 33)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)
OCT , 1983 06...	1000	3.5	188	7.3	10.0	71	0	22	3.8	7.8	.4
JUN , 1984 14...	0930	5.5	206	6.9	18.0	82	0	26	4.2	10	.5
JUL 25...	1510	33	128	7.3	21.0	37	0	11	2.2	5.6	.4

06463290 - SAND DRAW NR JOHNSTOWN NE (LAT 42 34 08 LONG 099 58 08)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)
OCT , 1983 05...	1710	2.5	166	7.4	15.5	59	0	19	2.7	7.0	.4
JUN , 1984 13...	0940	3.6	167	7.5	17.0	74	0	24	3.3	7.1	.4
JUL 25...	0840	29	103	7.4	18.0	37	[illegible]	11	2.2	4.0	.3

06463050 - LONG PINE CREEK AT LONG PINE, NEBR. (LAT 42 32 59 LONG 099 42 23)

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
OCT , 1983 06...	4.0	58	3.8	1.1	.20	54	120	.16	18	1.2
JUN , 1984 13...	4.0	62	4.1	.90	.30	53	120	.17	20	1.1
JUL 26...	4.1	48	9.4	1.4	.20	40	110	.14	21	.83

06463090 - BONE CREEK AT AINSWORTH, NEBR (LAT 42 32 51 LONG 099 52 33)

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
OCT , 1983 06...	6.9	79	7.1	3.8	.30	47	150	.20	--	2.5
JUN , 1984 14...	4.3	95	9.5	2.1	.40	38	150	.21	2.2	1.9
JUL 25...	9.2	37	16	2.8	.30	15	84	.11	7.5	1.8

06463290 - SAND DRAW NR JOHNSTOWN NE (LAT 42 34 08 LONG 099 58 08)

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
OCT , 1983 05...	6.7	74	6.8	3.4	.30	39	130	.18	.87	.19
JUN , 1984 13...	3.4	89	6.9	1.3	.40	33	130	.18	1.3	.24
JUL 25...	6.1	34	13	2.4	.20	15	74	.10	5.8	1.5

NIOBRARA RIVER BASIN--Continued

06463310 - SAND DRAW NR MEADVILLE NE (LAT 42 38 10 LONG 099 51 10)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)
OCT , 1983											
06...	1110	9.7	263	8.0	12.0	97	0	30	5.4	15	.7
JUN , 1984											
13...	1215	14	246	8.1	23.5	92	0	29	4.8	12	.6
JUL											
24...	1250	96	177	7.3	20.0	48	0	15	2.6	8.0	.5

06463350 - BONE CREEK NEAR LONG PINE, NEBR (LAT 42 40 16 LONG 099 46 06)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)
OCT , 1983											
06...	1530	42	257	8.0	19.0	98	0	31	5.0	12	.5
JUN , 1984											
13...	1310	100	217	8.2	24.0	86	0	27	4.4	9.7	.5
JUL											
26...	0910	472	188	7.4	19.5	61	0	19	3.2	7.8	.5

06463310 - SAND DRAW NR MEADVILLE NE (LAT 42 38 10 LONG 099 51 10)

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
OCT , 1983										
06...	9.5	115	6.6	4.3	.30	36	180	.24	4.6	3.6
JUN , 1984										
13...	6.8	109	11	3.1	.30	35	170	.23	6.3	3.3
JUL										
24...	9.4	59	24	3.5	.20	20	120	.16	31	2.8

06463350 - BONE CREEK NEAR LONG PINE, NEBR (LAT 42 40 16 LONG 099 46 06)

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
OCT , 1983										
06...	4.3	108	5.5	6.0	.30	52	180	.25	21	2.4
JUN , 1984										
13...	7.3	101	9.6	3.4	.30	45	170	.23	45	1.4
JUL										
26...	14	63	18	5.9	.30	29	130	.18	172	2.5

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
NIOBRARA RIVER BASIN--Continued									
06465050 - EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)									
NOV , 1983									
08...	1500	22	290	7.8	8.5	5	120	12	39
APR , 1984									
25...	1605	39	256	7.4	13.5	35	110	9	35
06465100 - EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)									
NOV , 1983									
08...	1555	8.7	280	7.9	9.0	5	130	0	43
APR , 1984									
25...	1645	18	302	7.7	13.0	25	140	0	46
06465398 - REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)									
NOV , 1983									
08...	1225	63	209	7.7	9.5	10	84	0	28
APR , 1984									
25...	1410	35	220	7.2	13.5	45	91	0	30
06465420 - BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)									
NOV , 1983									
08...	1320	9.3	274	7.8	9.0	5	120	0	40
APR , 1984									
25...	1505	20	316	7.4	13.5	44	140	1	45

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
06465050 - EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)									
NOV , 1983									
08...	5.5	9.3	.4	6.1	108	13	5.9	.20	41
APR , 1984									
25...	4.8	7.5	.3	5.0	98	15	3.8	.20	33
06465100 - EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)									
NOV , 1983									
08...	4.5	6.8	.3	5.2	139	5.0	2.1	.30	53
APR , 1984									
25...	5.2	7.1	.3	6.4	149	11	2.7	.30	40
06465398 - REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)									
NOV , 1983									
08...	3.5	7.6	.4	5.5	90	11	3.3	.30	46
APR , 1984									
25...	4.0	7.4	.4	4.6	92	12	3.1	.20	29
06465420 - BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)									
NOV , 1983									
08...	4.5	8.5	.4	5.9	127	10	3.5	.30	48
APR , 1984									
25...	6.2	9.6	.4	5.3	137	20	4.4	.30	27

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	BORON, DISSOLVED (UG/L AS B) (01020)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
NIOBRARA RIVER BASIN--Continued								
06465050 - EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)								
NOV , 1983								
08...	180	.25	11	5.5	.130	20	15	5
APR , 1984								
25...	160	.22	17	5.2	.130	20	110	5
06465100 - EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)								
NOV , 1983								
08...	200	.28	4.8	1.2	.040	20	11	6
APR , 1984								
25...	210	.28	10	1.3	.200	20	50	4
06465398 - REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)								
NOV , 1983								
08...	160	.22	27	1.7	.070	20	50	8
APR , 1984								
25...	150	.20	14	1.7	.070	20	84	11
06465420 - BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)								
NOV , 1983								
08...	200	.27	4.9	1.8	.070	20	29	19
APR , 1984								
25...	200	.27	11	1.8	.080	20	59	25

AVAILABLE

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)

PLATTE RIVER BASIN

06788495 - DANE C AT ORD, NEBR. (LAT 41 36 31 LONG 098 56 36)

DATE	TIME	(00061)	(00095)	(00400)	(00010)	(00080)	(00900)	(95902)	(00915)
NOV , 1983									
09...	1630	.59	730	7.8	4.5	10	360	27	110
APR , 1984									
27...	1630	1.0	816	8.3	9.5	30	390	47	120

06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

DATE	TIME	(00061)	(00095)	(00400)	(00010)	(00080)	(00900)	(95902)	(00915)
NOV , 1983									
09...	1410	1.3	673	7.9	6.0	10	330	0	95
APR , 1984									
27...	1510	7.9	558	7.9	12.5	70	260	0	72

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)

06788495 - DANE C AT ORD, NEBR. (LAT 41 36 31 LONG 098 56 36)

DATE	(00925)	(00930)	(00931)	(00935)	(90410)	(00945)	(00940)	(00950)	(00955)
NOV , 1983									
09...	20	24	.6	15	331	51	16	.30	45
APR , 1984									
27...	23	28	.6	18	348	93	20	.30	28

06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

DATE	(00925)	(00930)	(00931)	(00935)	(90410)	(00945)	(00940)	(00950)	(00955)
NOV , 1983									
09...	23	26	.6	16	354	31	7.8	.30	45
APR , 1984									
27...	19	16	.4	18	277	29	7.5	.30	23

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	BORON, DISSOLVED (UG/L AS B) (01020)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)

06788495 - DANE C AT ORD, NEBR. (LAT 41 36 31 LONG 098 56 36)

DATE	(70301)	(70303)	(70302)	(00631)	(00666)	(01020)	(01046)	(01056)
NOV , 1983								
09...	480	.65	.76	4.7	.320	70	22	120
APR , 1984								
27...	530	.72	1.4	4.6	.340	70	11	300

06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

DATE	(70301)	(70303)	(70302)	(00631)	(00666)	(01020)	(01046)	(01056)
NOV , 1983								
09...	460	.62	1.6	7.1	.540	100	40	420
APR , 1984								
27...	350	.48	7.5	1.6	.620	60	22	400

ADAMS COUNTY

403403098244001. Local number 7N-10W-23AB.

LOCATION.--Lat 40°34'03", long 98°24'40", NW1/4NE1/4 sec.23, T.7 N., R.10 W., Hydrologic Unit 10270206, 0.5 mi west of the west junction of Routes 281 and 6, in the south part of Hastings. Owner: Henry Fricke.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 8 in, depth 155 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,927 ft. Measuring point: Top of casing 1.0 ft above land-surface datum.

REMARKS.--Large amounts of ground water are pumped from municipal and industrial wells located east and northeast of the well and from irrigation wells in other directions.

PERIOD OF RECORD.--August 1934 to October 1938; August 1940 to December 1950; and January 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 99.95 ft below land-surface datum, Jan. 22, 1935; lowest, 128.82 ft below land-surface datum, July 10, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	120.49	117.70	117.41	117.00	116.84	116.45	116.16	115.85	115.40	115.46	119.68	118.57
10	118.05	117.75	117.28	117.04	116.60	116.41	116.07	115.74	115.49	117.46	121.42	118.26
15	118.04	117.67	117.32	116.95	116.66	116.52	116.06	115.71	115.34	119.20	120.53	118.21
20	117.96	117.52	117.22	116.97	116.71	116.28	116.10	115.62	115.41	119.54	120.86	121.23
25	118.01	117.42	117.01	116.89	116.51	116.20	116.25	115.65	115.36	119.35	120.30	117.86
EOM	117.72	117.45	117.08	116.71	116.46	115.86	116.07	115.43	115.67	121.83	120.45	117.56

WTR YEAR 1984 MAX 115.20 JAN 19, 1984 MIN 121.83 JUL 31, 1984

BLAINE COUNTY

414958100061501. Local number 22N-24W-33CA.

LOCATION.--Lat 41°49'58", long 100°06'15", NE1/4SW1/4 sec.33, T.22 N., R.24 W., Hydrologic Unit 10210001, approximately 500 ft west of junction of State Highways 91 and 2 north of Dunning. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 13 ft, screened 11 to 13 ft.

DATUM.--Altitude of land-surface datum is 2,618 ft. Measuring point: Top of casing 1.40 ft above land-surface datum.

PERIOD OF RECORD.--December 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, [illegible] ft below land-surface datum, Mar. 8, 1950; lowest, 6.97 ft below land-surface datum, Aug. 8, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	3.79	JAN 16	2.98	MAR 13	2.37	MAY 10	1.86	JUL 2	3.66	AUG 20	4.39
NOV 21	3.45	FEB 14	2.46	APR 10	1.66	MAY 30	2.79	JUL 30	4.40	SEP 24	4.72

BOONE COUNTY

413323098074501. Local number 18N-7W-4CA.

LOCATION.--Lat 41°33'23", long 98°07'45", NE1/4SW1/4 sec.4, T.18 N., R.7 W., Hydrologic Unit 10210010, at junction of State Highways 52 and 56 approximately 1 mi east of Cedar Rapids. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 22 ft, screened 20 to 22 ft.

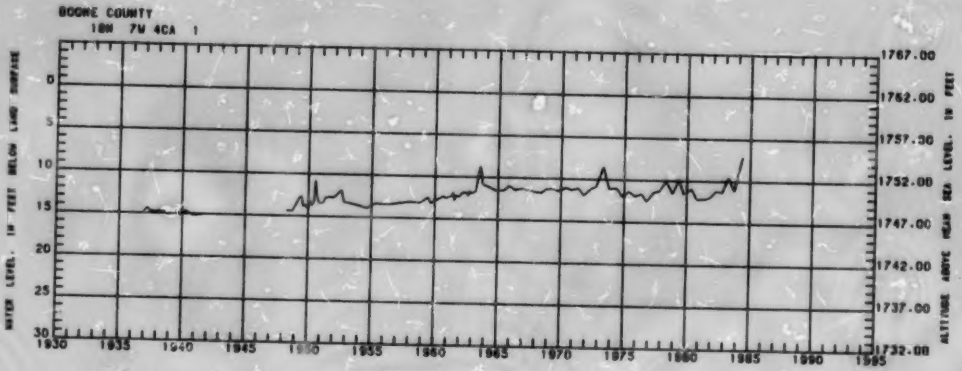
DATUM.--Altitude of land-surface datum is 1,762 ft. Measuring point: Top of casing 2.90 ft above land-surface datum.

PERIOD OF RECORD.--November 1936 to October 1942; April 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.15 ft below land-surface datum, May 17, 1984; lowest, 15.17 ft below land-surface datum, Oct. 26, 1940.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	11.13	MAY 17	7.15								



BOX BUTTE COUNTY

420945102551501. Local number 25N-48W-4DDD.

LOCATION.--Lat 42°09'45", long 102°55'15", SE1/4SE1/4SE1/4 sec.4, T.25 N., R.48 W., Hydrologic Unit 10150003, approximately 3.6 mi south and 2.8 mi east of Berea. Owner: U.S. Geological Survey.

AQUIFER.--Marsland Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 204 ft, screened 190 to 193 ft.

DATUM.--Altitude of land-surface datum is 4,032.95 ft. Measuring point: Top of pipe 2.00 ft above land-surface datum.

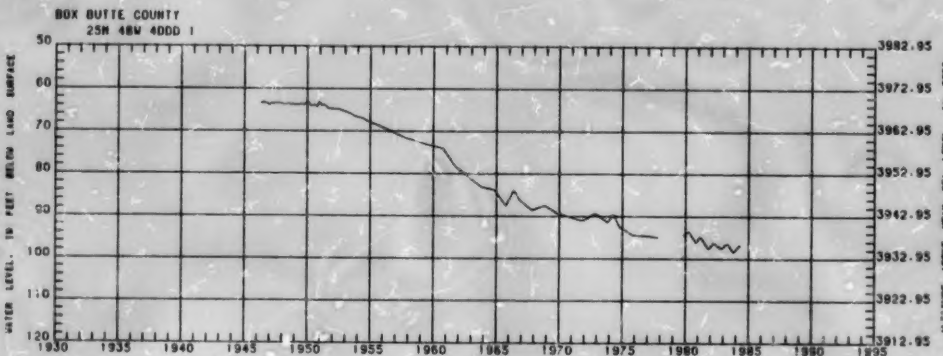
REMARKS.--Water levels in vicinity of well are affected by large withdrawals of ground water for irrigation use.

PERIOD OF RECORD.--April 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.14 ft below land-surface datum, Jan. 25, 1950; lowest, 98.44 ft below land-surface datum, Oct. 14, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	98.44	APR 18	96.78								



BROWN COUNTY

423307099494501. Local number 30N-21W-19CC.

LOCATION.--Lat 42°33'07", long 99°49'45", SW1/4SW1/4 sec.19, T.30 N., R.21 W., Hydrologic Unit 10150004, 1.2 mi east of junction of U.S. Highway 20 and Route 7 in Ainsworth. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 52 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,511.44 ft. Measuring point: Top of casing 0.20 ft above land-surface datum.

REMARKS.--Water levels in well are affected by pumpage of ground water for irrigation and seepage losses from nearby irrigation project.

PERIOD OF RECORD.--November 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.97 ft below land-surface datum, Sept. 30, 1983; lowest, 40.96 ft below land-surface datum, Sept. 7, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	31.94	31.81	31.98	.....	32.38	32.54	32.59	32.33	32.13	32.47	32.46	32.29
10	31.91	31.86	31.97	32.11	32.36	32.60	32.54	32.28	32.21	32.57	32.50	32.20
15	31.90	31.87	32.03	32.16	32.45	32.66	32.59	32.30	32.21	32.60	32.43	32.16
20	31.88	31.80	32.08	32.20	32.50	32.56	32.49	32.24	32.20	32.61	32.42	31.99
25	31.91	31.84	.....	32.25	32.52	32.54	32.38	32.24	32.24	32.70	32.25	31.95
EOM	31.86	31.95	.....	32.35	32.52	32.62	32.40	32.21	32.27	32.58	32.22	31.87

WTR YEAR 1984 MAX 31.74 NOV 13, 14, 1984 MIN 32.70 JULY 25, 1984

BUFFALO COUNTY

404618098504401. Local number 9N-14W-1DC.

LOCATION.--Lat 40°46'18", long 98°50'44", SW1/4SE1/4 sec.1, T.9 N., R.14 W., Hydrologic Unit 10200102, 1.3 mi north of the intersection of Route 30 and the North-South range-line road on the east side of Gibbon, then 0.5 mi west on section-line road. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 38 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,060.43 ft. Measuring point: Top of casing 0.80 ft above land-surface datum.

REMARKS.--Water levels in well are affected by pumpage from nearby irrigation wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.36 ft below land-surface datum, June 11, 1952; lowest, 29.22 ft below land-surface datum, Aug. 10, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	25.93	25.44	25.18	.....	.....	24.42	24.03	.....	22.00	20.60	22.91	24.50
10	25.82	25.40H	25.10	.....	24.58	24.42	23.88	.....	.....	20.25	23.12	23.85
15	25.70	25.37	25.05	.....	24.53	24.32	23.80	.....	21.75	20.17	23.82	23.68
20	25.64	25.28	25.00	.....	24.53	24.23	23.78	.....	21.43	21.13	24.23	23.45
25	25.57	25.25	.....	.....	24.46	24.18	23.77	22.40	21.23	.....	23.41	23.28
EOM	25.49	25.23	.....	.....	24.46	24.11	23.77	22.22	20.87	22.43	24.25	23.14

WTR YEAR 1984 MAX 20.10 JUL 16, 1984 MIN 26.05 OCT 1, 1983

H TAPE MEASUREMENT

BUFFALO COUNTY

404345098560001. Local number 9N-14W-19DD.

LOCATION.--Lat 40°43'45", long 98°56'00", SE1/4SE1/4 sec.19, T.9 N., R.14 W., Hydrologic Unit 10200102, 4.7 mi west-southwest of Gibbon on U.S. Highway 30. Owner: Robert D. Lewis.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in, depth 54 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,102.16 ft. Measuring point: Hole in pump base 0.70 ft above land-surface datum.

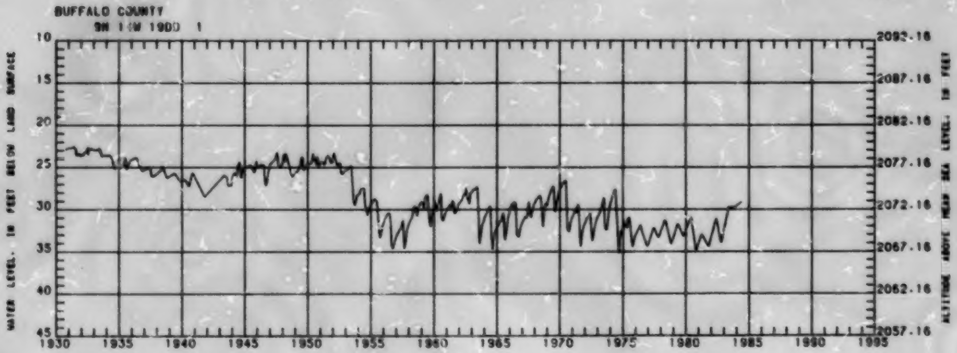
REMARKS.--Water levels in well are affected by pumping of well and of nearby wells for irrigation supplies.

PERIOD OF RECORD.--October 1930 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.55 ft below land-surface datum, June 9, 1931; lowest, 35.20 ft below land-surface datum, Aug. 30, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	29.76	MAY 22	29.15								



BUTLER COUNTY

411420097173002. Local number 15N-1E-27DD2.

LOCATION.--Lat 41°14'20", long 97°17'30", SE1/4SE1/4 sec.27, T.15 N., R.1 E., Hydrologic Unit 10270201, 2 mi north of the northeast corner of Rising City. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 210.0 ft, perforated 199 to 210 ft.

DATUM.--Altitude of land-surface datum is 1,618 ft. Measuring point: Top of platform, at land-surface datum.

REMARKS.--Replacement for 411420097173001, local number 15N-1E-27DD, period of record June 1958 to January 1977. Water levels in well affected by pumping from nearby wells during irrigation season.

PERIOD OF RECORD.--February 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 101.40 ft below land-surface datum, June 6, 1984; lowest, 174.50 ft below land-surface datum, Aug. 3, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	112.02	106.94	.....	.....	.....	103.10	102.54	101.77	.....	.....	.....	.....
10	110.88	106.37	.....	.....	103.54	.....	102.48	101.76	.....	.....	.....	.....
15	109.55	.....	.....	.....	103.35	102.90	102.29	.....	.....	115.95	.....	121.80
20	108.25	.....	.....	.....	103.23	102.87	102.28	101.75	.....	.....	.....	117.80
25	108.10	105.55	.....	.....	103.20	102.81	102.08	101.57	.....	.....	.....	114.30
EOM	107.50	.....	.....	.....	103.23	102.68	101.92	101.55	.....	.....	.....	112.18

WTR YEAR 1984 MAX 101.40H JUN 6, 1984 MIN 138.57 AUG 27, 1984

H TAPE MEASUREMENT

CHASE COUNTY

403220101384001. Local number 7N-38W-28CC.

LOCATION.--Lat 40°32'20", long 101°38'40", SW1/4SW1/4 sec.28, T.7 N., R.38 W., Hydrologic Unit 10250005, about 0.5 mi north of Imperial. Owner: Roy Hust.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled unused observation water-table well, diameter 18 in, depth 143 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,284.6 ft. Measuring point: Top of casing 0.30 ft above land-surface datum.

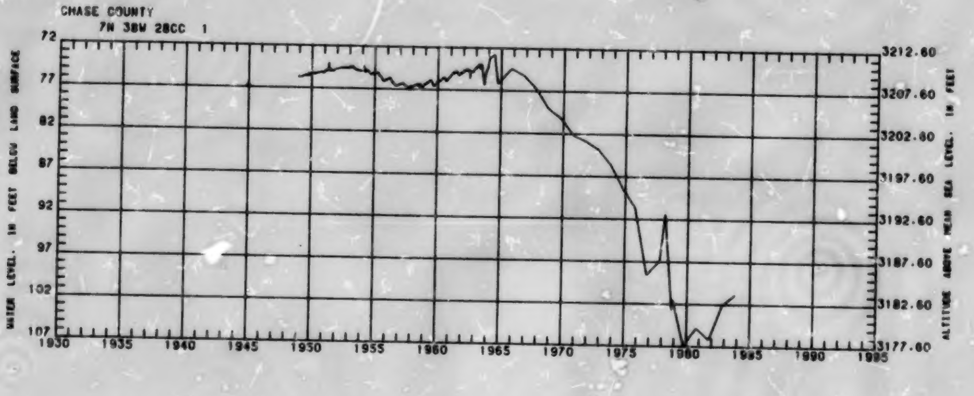
REMARKS.--Recording gage was installed on this well from December 1948 to December 1963. Water levels in well are affected by irrigation pumpage in area.

PERIOD OF RECORD.--December 1944; December 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.82 ft below land-surface datum, June 29, 1964; lowest measured, 106.90 ft below land-surface datum, Oct. 6, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	100.88										



CHASE COUNTY

403235101395501. Local number 7N-38W-29CBB.

LOCATION.--Lat 40°32'35", long 101°39'55", NW1/4NW1/4SW1/4 sec.29, T.2 N., R.38 W., Hydrologic Unit 10250005, 0.5 mi north and 1 mi west of Imperial on U.S. Highway 6, then 0.5 mi north on gravel road. Owner: U.S. Geological Survey.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5.50 in, depth 230 ft, perforated 190 to 230 ft.

DATUM.--Altitude of land-surface datum is 3,290.30 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels in well are affected by irrigation pumpage in area.

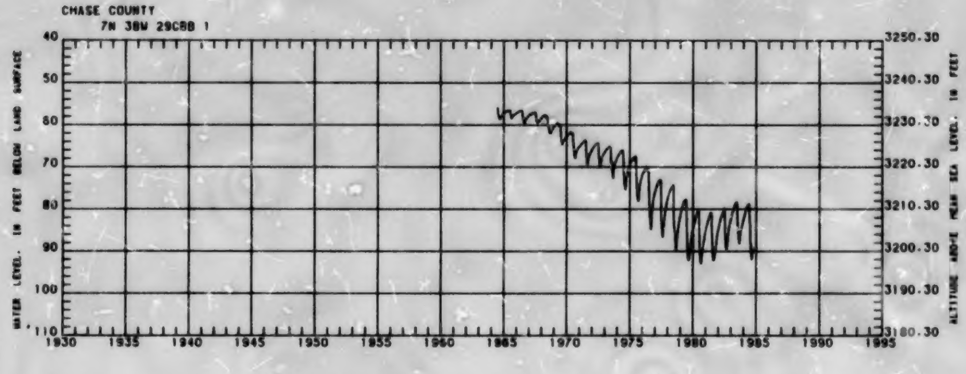
PERIOD OF RECORD.--June 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.87 ft below land-surface datum, July 4, 1964; lowest, 93.05 ft below land-surface datum, Aug. 25, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	85.61	84.59	83.70	82.41	81.59	80.77	79.92	79.14	79.51	82.60	88.32	91.86
10	85.24	84.53	83.43	82.54	81.18	80.69	79.78	78.95	79.30	84.26	89.99	91.20
15	85.20	84.40	.....	82.19	81.32	80.60	79.86	78.95	78.91	85.85	90.90	90.62
20	84.95	83.92	.....	82.08	81.07	80.24	79.52	78.85	78.76	87.51	91.17	90.18
25	84.97	83.75	.....	81.87	80.89	79.96	79.20	79.13	80.49	88.22	90.66	89.94
EOM	84.50	83.75	.....	81.60	80.79	80.08	79.44	78.99	82.37	89.41	92.07	89.39

WTR YEAR 1984 MAX 78.60 MAY 24, 1984 MIN 92.12 AUG 30, 1984



CHERRY COUNTY

423205100321501. Local number 30N-28W-36AAA.

LOCATION.--Lat 42°32'05", long 100°32'15", NE1/4NE1/4NE1/4 sec.36, T.30 N., R.28 W., Hydrologic Unit 10150004, 8 mi south of the intersection of U.S. Highway 83 and State Highway 483, south of Valentine. Owner: U.S. Geological Survey.

AQUIFER.--Sand deposits of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1.25 in, depth 12 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,897.26 ft. Measuring point: Top of casing 3.00 ft above land-surface datum.

REMARKS.--Water levels affected by evapotranspiration.

PERIOD OF RECORD.--October 1961 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +0.20 ft above land-surface datum, Jan. 11, 1974, Jan. 11, 1983, and Jan. 13, 1984. Lowest, 1.99 ft below land-surface datum, Oct. 4, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	0.42	JAN 13+	0.20								

CLAY COUNTY

402940098154001. Local number 6N-8W-17BB.

LOCATION.--Lat 40°29'40", long 98°15'40", NW1/4NW1/4 sec.17, T.6 N., R.8 W., Hydrologic Unit 10270206, 0.7 mi south of Glenville. Owner: Willard W. Kissinger.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in, depth 151 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,846 ft. Measuring point: Hole in turbine base at land-surface datum.

REMARKS.--Water levels affected by pumping during irrigation season.

PERIOD OF RECORD.--October 1952; June 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 95.53 ft below land-surface datum, June 24, 1954; lowest, 108.85 ft below land-surface datum, Oct. 18, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	108.60	MAR 29	105.95								

COLFAX COUNTY

412810097054501. Local number 17N-3E-4CC.

LOCATION.--Lat 41°28'10", long 97°05'45", SW1/4SW1/4 sec.4, T.17 N., R.3 E., Hydrologic Unit 10200201, 2 mi west and 1 mi north of intersection of U.S. Highway 30 and State Highway 15 in Schuyler. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 16 ft, screened 14 to 16 ft.

DATUM.--Altitude of land-surface datum is 1,370.58 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

PERIOD OF RECORD.--September 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.15 ft below land-surface datum, Apr. 1, 1952; lowest, 10.68 ft below land-surface datum, Oct. 29, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	6.07										

DAWES COUNTY

424100103243501. Local number 31N-52W-3DC.

LOCATION.--Lat 42°41'00", long 103°24'35", SW1/4SE1/4 sec.3, T.31 N., R.52 W., Hydrologic Unit 10140201, behind house at 312 Annin Street in Crawford. Owner: T. P. Moody.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 39 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,685 ft. Measuring point: Edge of iron plate 1.07 ft above land-surface datum.

PERIOD OF RECORD.--August 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.87 ft below land-surface datum, May 30, 1948; lowest, 22.28 ft below land-surface datum, Oct. 31, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	19.72	APR 24	19.28								

DAWSON COUNTY

405250099445501. Local number 10N-21W-18DDD.

LOCATION.--Lat 40°52'50", long 99°44'55", SE1/4SE1/4SE1/4 sec.18, T.10 N., R.21 W., Hydrologic Unit 10200101, 3.5 mi north of the intersection of Route 21 and U.S. Highway 30 in Lexington. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 120 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,420.58 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels in well affected by pumpage from nearby irrigation wells and by seepage from irrigation canals.

PERIOD OF RECORD.--July 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.06 ft below land-surface datum, June 18, 1984; lowest, 21.50 ft below land-surface datum, July 16, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	11.94	12.29	12.62	12.83	12.59	12.36	11.96	9.83	9.42	7.43	13.79	10.89
10	11.92	12.33H	12.62	.....	12.42	12.37	11.62	9.33	9.67	7.89	9.89	11.03
15	11.99	12.42	12.69	12.87	12.42	12.34	11.42	9.25	7.86	13.52	10.01	10.91
20	12.05	12.43	12.73	12.98	12.47	12.25	11.25	9.24	7.28	13.59	14.65	10.92
25	12.20	12.43	12.71	12.94	12.40	12.18	10.42	9.36	7.56	8.64	13.10	11.13
EOM	12.22	12.58	12.76	12.60	12.43	12.07	10.15	9.38	7.84	13.65	10.30	11.20

WTR YEAR 1984 MAX 7.06 JUN 18, 1984 MIN 14.65 AUG 20, 1984

H TAPE MEASUREMENT

DAWSON COUNTY

404850099503501. Local number 10N-22W-29AA.

LOCATION.--Lat 40°48'50", long 99°50'35", NE1/4NE1/4 sec.29, T.10 N., R.22 W., Hydrologic Unit 10200101, 2 mi east of Dorr. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 12 ft, screened 10 to 12 ft.

DATUM.--Altitude of land-surface datum is 2,435.14 ft. Measuring point: Top of casing 1.80 ft above land-surface datum.

REMARKS.--Water levels in well affected by pumping from nearby wells during irrigation season. No well reading was made in 1983 water year.

PERIOD OF RECORD.--October 1931 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.1 ft below land-surface datum, Oct. 13, 1965; lowest, 17.69 ft below land-surface datum, Feb. 8, 1946.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	6.31										

DUNDY COUNTY

400155101521302. Local number 1N-40W-29BB2.

LOCATION.--Lat 40°01'55", long 101°52'13", NW1/4NW1/4 sec.29, T.1 N., R.40 W., Hydrologic Unit 10250002, 3.5 mi east of Haigler on U.S. Highway 34 and 0.5 mi north. Well is within 0.5 mi of Republican River. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 48.8 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,205 ft. Measuring point: South side of casing 1.6 ft above land-surface datum.

REMARKS.--Replacement for well 400155101521301, local number 1N-40W-29BB1 with period of record from May 1946 to June 1975. Water levels in well are affected by pumping from nearby irrigation wells, evapotranspiration, and changes in stage of Republican River.

PERIOD OF RECORD.--October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.41 ft below land-surface datum, June 21, 1984; lowest, 20.97 ft below land-surface datum, Sept. 12, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	17.93	17.70	17.14	16.83	16.53	16.34	16.10	15.87	15.62	15.97	16.99	17.30
10	17.75	17.53	17.09	16.77	16.48	16.32	16.20	15.75	15.53	16.16	17.18	17.57
15	17.64	17.41	17.04	16.76	16.46	16.28	16.16	15.66	15.46	16.34	17.24	17.38
20	17.57	17.32	17.00	16.70	16.43	16.23	16.10	15.54	15.43	16.52	17.36	17.28
25	17.52	17.26	16.94	16.66	16.39	16.18	16.03	15.48	15.64	16.69	17.40	17.58
EOM	17.43	17.22	16.87	16.62	16.36	16.14	15.95	15.58	15.76	16.90	17.46	17.36

WTR YEAR 1984 MAX 15.41 JUN 21, 1984 MIN 17.93 OCT 5, 6, and 7, 1983

FILLMORE COUNTY

402504097432201. Local number 5N-4W-12BDC.

LOCATION.--Lat 40°25'04", long 97°43'22", SW1/4SE1/4NW1/4 sec.12, T.5 N., R.4 W., Hydrologic Unit 10270206, one-half block south of fire station on principal north-south street in Shickley. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 260.0 ft, perforated 100 to 260 ft.

DATUM.--Altitude of land-surface datum is 1651 ft. Measuring point: Top of casing 1.5 ft above land-surface datum.

REMARKS.--Replacement for 402450097434001, local number 5N-4W-12BC, period of record October 1956 to September 1977. Water levels in well affected by pumping from nearby municipal and irrigation wells.

PERIOD OF RECORD.--June 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 90.92 ft below land-surface datum, Apr. 17, 1978; lowest, 96.91 ft below land-surface datum, Sept. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	96.33	96.09	96.02	95.46	94.92	95.00	94.71	94.36	93.94	93.75	95.40	96.98
10	96.17	96.20	95.79	95.66	95.05	95.28	94.66	94.26	94.12	94.11	95.57	97.17
15	96.40	96.06	96.02	95.37	95.23	95.40	94.67	94.24	93.77	94.57	95.91	97.30
20	96.32	95.95	95.75	95.48	95.15	94.69	94.54	94.12	93.83	94.76	96.32	97.09
25	96.23	95.85	95.53	95.36	95.15	94.65	94.42	94.26	93.65	95.00	96.43	97.32
EOM	96.12	96.07	95.59	95.23	95.00	94.79	94.66	93.93	93.83	95.26	96.68	97.01

WTR YEAR 1984 MAX 93.46 JUL 5, 1984 MIN 97.30 SEP 15, 1983

FILLMORE COUNTY

403800097300701. Local number 8N-2W-26AD.

LOCATION.--Lat 40°38'00", long 97°30'07", SE1/4NE1/4 sec.26, T.8 N., R.2 W., Hydrologic Unit 10270203, 2.5 mi west on Route 6 from the principal street of Exeter, then 0.4 mi south. Owner: U.S. Geological Survey.

AQUIFER.--Loess of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 40 ft, perforated 25 to 40 ft.

DATUM.--Altitude of land-surface datum is 1,610 ft. Measuring point: Top of casing at land-surface datum.

REMARKS.--Perched aquifer, water levels affected by infiltration and deep percolation of applied irrigation water pumped from deeper aquifer.

PERIOD OF RECORD.--October 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.24 ft below land-surface datum, June 18, 1983; lowest, 24.16 ft below land-surface datum, July 10, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	4.97	4.95	4.05	.....	2.47	2.12	1.67	1.79	2.26	2.31	5.29	7.62
10	5.17	3.47	4.14	.....	2.84	2.91	1.87	2.03	3.24	2.94	5.68	7.97
15	4.45	3.74	4.40	.....	2.59	3.12	2.92	2.95	1.60	3.75	6.12	8.35
20	4.58	3.14	4.54	5.11	3.35	2.47	2.56	1.87	1.86	4.15	6.61	8.54
25	4.81	3.52	.....	5.15	2.20	1.78	1.70	1.93	2.68	4.57	6.84	8.42
EOM	4.87	4.00	.....	2.60	2.62	1.98	1.70	2.47	3.47	4.93	7.21	9.07

WTR YEAR 1984 MAX 1.31 APR 2, 1984 MIN 9.07 SEP 30, 1984

FURNAS COUNTY

401718099491001. Local number 4N-22W-29AD.

LOCATION.--Lat 40°17'18", long 99°49'10", SE1/4NE1/4 sec.29, T.4 N., R.22 W., Hydrologic Unit 10250009, 2 mi west and 0.5 mi north of Edison. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 23 ft, screened 21 to 23 ft.

DATUM.--Altitude of land-surface datum is 2,134 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.60 ft below land surface datum, Aug. 22, 1978; lowest, 17.69 ft below land-surface datum, Feb. 8, 1946.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	10.00	MAY 9	7.90	JULY 12	8.80	AUG 2	9.20	AUG 22	9.00	SEP 17	9.50
MAY 5	10.00	JUN 12	8.80								

GARDEN COUNTY

414124102230101. Local number 20N-44W-22CB.

LOCATION.--Lat 41°41'24", long 102°23'01", NW1/4SW1/4 sec.22, T.20 N., R.44 W., Hydrologic Unit 10180009, 5.8 mi southeast of refuge headquarters. Owner: Crescent Lake Migratory Bird Refuge.

AQUIFER.--Sand deposits of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.50 in, depth 22.1 ft below land-surface datum.

DATUM.--Altitude of land-surface datum is 3783.16 ft. Measuring point: Top of casing 1.61 ft above land-surface datum.

PERIOD OF RECORD.--August 1934-39; 1943 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.57 ft below land-surface datum, Oct. 7, 1934; lowest, 20.92 ft below land-surface datum, Mar. 27, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	19.21	MAR 1	19.37	JUL 10	18.71						

GARDEN COUNTY

414728102292601. Local number 21N-45W-13CA

LOCATION.--Lat 41°47'28", long 102°29'26", NE1/4SW1/4 sec.13, T.21 N., R.45 W., Hydrologic Unit 10180009, 0.5 mi west of Rush Lake. Owner: Crescent Lake Migratory Bird Refuge.

AQUIFER.--Sand deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.5 in, depth unknown, perforated below water table.

DATUM.--Altitude of land-surface datum is 3,839.78 ft. Measuring point: Top of casing 1.52 ft above land-surface datum.

PERIOD OF RECORD.--August 1934-39, 1943 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.00 ft below land-surface datum, Mar. 17, 1961; lowest, 6.67 ft below land-surface datum, June 17, 1949.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	3.99	DEC 13	3.95	FEB 17	3.65	JUN 27	3.49				

GARFIELD COUNTY

414718099083201. Local number 21N-16W-14CB.

LOCATION.--Lat 41°47'18", long 99°08'32", NW1/4SW1/4 sec.14, T.21 N., R.16 W., Hydrologic Unit 10210007, 5 mi east and 1 mi north of Burwell. Owner: Frank Smolik.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in, depth 154 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,174 ft. Measuring point: Hole in turbine base 2.00 ft above land-surface datum.

REMARKS.--Water levels affected by pumping during irrigation season.

PERIOD OF RECORD.--October 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.62 ft below land-surface datum, Oct. 16, 1973; lowest, 24.92 ft below land-surface datum, Oct. 28, 1959.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	21.07										

GOSPER COUNTY

403626099451401. Local number 7N-21W-6BC.

LOCATION.--Lat 40°36'26", long 99°45'14", SW1/4NW1/4 sec.2, T.7 N., R.21 W., Hydrologic Unit 10200101, 1 mi west and 2 mi north of Smithfield. Owner: Andy Larson Estate.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in, depth 132 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,466.95 ft. Measuring point: Top of casing 0.40 ft above land-surface datum.

REMARKS.--Water levels in well affected by pumping from nearby irrigation wells and by infiltration and deep percolation from nearby irrigation canal.

PERIOD OF RECORD.--September 1934 to July 1940; January 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50. ft below land-surface datum, Oct. 6, 1983; lowest, 117.80 ft below land-surface datum, Sept. 26, 1935.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	50.00										

HALL COUNTY

405315098304302. Local number 11N-11W-25CC2.

LOCATION.--Lat 40°53'15", long 98°30'43", SW1/4SW1/4 sec.25, T.11 N., R.11 W., Hydrologic Unit 10200103, 1.0 mi north and 2.0 mi west of Alda. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 65 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,924.0 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

REMARKS.--Replacement for 405315098304301, local number 11N-11W-25CC, period of record October 1946 to November 1977. Water levels in wells affected by pumping from nearby wells during irrigation season.

PERIOD OF RECORD.-- April 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.53 ft below land-surface datum, July 18, 19 and 20, 1984; lowest, 25.98 ft below land-surface datum, Aug. 31, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	21.22	20.90	20.71	20.52	20.24	20.03	19.53	18.25	16.72	16.01	16.12	16.98
10	21.17	20.87	20.67	20.57	20.14	20.01	19.34	17.97	16.64	15.71	16.32	16.99
15	21.08	20.86	20.66	20.52	20.12	20.00	19.20	17.71	16.50	15.62	16.52	17.05
20	21.06	20.76	20.64	20.48	20.14	19.89	19.02	17.45	16.37	15.57	16.75	16.93
25	21.04	20.75	20.62	20.44	20.06	19.84	18.79	17.21	16.26	15.76	16.78	17.00
EOM	20.95	20.75	20.56	20.41	20.08	19.65	18.52	16.93	16.14	15.94	16.86	16.94

WTR YEAR 1983 MAX 15.53 JUL 18, 19, and 20, 1984 MIN 21.28 OCT 1, 1983

HAMILTON COUNTY

404836097584101 Local number 10N-6W-27ACAA.

LOCATION.--Lat 40°48'36", long 97°58'41", SE1/4NE1/4 sec.27, T.10 N., R.6 W., Hydrologic Unit 10270203, 4.0 mi south of junction of Route 14 and U.S. Highway 34 in Aurora, then 1.0 mi east and 0.3 mi south. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of the Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 170 ft, casing perforated below water-table.

DATUM.--Altitude of land surface datum is 1791.3 ft. Measuring point: Top of casing 1.5 ft above land surface datum.

REMARKS.--Replacement for well 404825097583301. Local number 10N-6W-26BC with period of record March 1956 to March 1982 located across the county road to the east.

PERIOD OF RECORD.--October 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 97.70 ft below land-surface datum, July 4, 1984; lowest, 107.40 ft below land-surface datum, Aug. 24, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	102.44	101.65	101.13	.....	.....	99.51	99.04	.....	.....	97.86	100.30	101.43
10	102.24	101.60	100.94	.....	.....	.....	98.97	.....	98.17	97.81	100.77	101.22
15	102.18	101.52	100.92	.....	99.78	99.51	98.93	.....	98.06	98.52	101.26	101.14
20	102.06	101.32	100.76	100.28	99.76	99.25	98.82	.....	97.96	98.82	101.57	100.87
25	102.02	101.20	.....	.....	99.63	99.17	98.70	.....	97.87	99.23	101.45	100.85
EOM	101.76	101.20	.....	.....	99.56	99.12	98.83	.....	97.82	99.78	101.90	100.55

WTR YEAR 1984 MAX 97.70 JUL 4, 1984 MIN 102.49 OCT 3, 1983

HAMILTON COUNTY

405514097573901. Local number 11N-6W-13CB.

LOCATION.--Lat 40°55'14", long 97°57'39", NW1/4SW1/4 sec.13, T.11 N., R.6 W., Hydrologic Unit 10270201, 2 mi east and 3.5 mi north of Aurora. Owner: O. S. Swedberg.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in, depth 194 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,812.2 ft. Measuring point: Hole in south side turbine base at land-surface datum.

REMARKS.--Water levels affected by pumping during irrigation season.

PERIOD OF RECORD.--September 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 90.04 ft below land-surface datum, Sept. 29, 1934; lowest, 117.18 ft below land-surface datum, Nov. 15, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 14	101.77										

HARLAN COUNTY

400920099215501. Local number 2N-18W-9BCC.

LOCATION.--Lat 40°09'20", long 99°21'55", SW1/4SW1/4NW1/4 sec.9, T.2 N., R.18 W., Hydrologic Unit 10250009, 3.5 mi north of the junction of Route 3 and U.S. Highway 183 in Alma. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5.50 in, depth 170 ft, perforated from 140 to 170 ft.

DATUM.--Altitude of land-surface datum is 2,120 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels affected by pumping from nearby wells during irrigation season.

PERIOD OF RECORD.--June 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 84.39 ft below land-surface datum, May 11, 1966; lowest, 109.96 ft below land-surface datum, Sept. 15, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	92.64	91.92	91.58	91.17	91.03	90.73	90.48	90.15	89.82	93.11	101.95	99.05
10	92.42	91.89	91.45	91.30	90.86	90.71	90.38	90.02	90.03	92.57	101.20	94.76
15	92.34	91.83	91.48	91.19	90.89	90.74	90.43	90.11	89.86	99.42	104.73	93.18
20	92.23	91.63	91.35	91.15	90.92	90.50	90.26	90.00	89.81	101.35	102.50	92.68
25	92.25	91.61	91.41	91.04	90.78	90.46	90.21	90.04	89.80	98.93	99.01	92.70
EOM	91.97	91.69	91.24	91.03	90.82	90.53	90.29	89.91	92.69	101.80	103.05	92.36

WTR YEAR 1984 MAX 89.74 JUN 25 and 26, 1984 MIN 104.75 AUG 16, 1984

AVAILABLE

HARLAN COUNTY

400620099274001. Local number 2N-19W-28DD.

LOCATION.--Lat 40°06'20", long 99°27'40", SE1/4SE1/4 sec.28, T.2 N., R.19 W., Hydrologic Unit 10250009, 1.8 mi south of Orleans. Owner: U.S. Geological Survey.

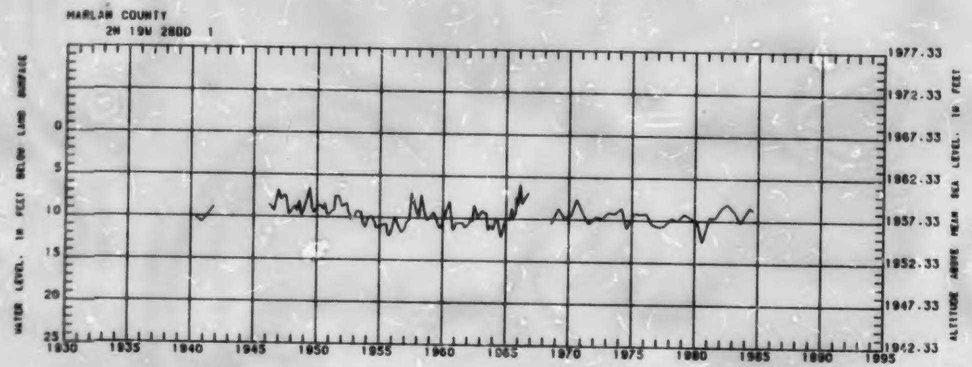
AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 22 ft, screened 20 to 22 ft.

DATUM.--Altitude of land-surface datum is 1,960 ft. Measuring point: Top of casing 1.20 ft above land-surface datum.

PERIOD OF RECORD.--May 1940 to October 1941; March 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.9 ft below land-surface datum, Feb. 15, 1966; lowest, 12.50 ft below land-surface datum, Aug. 5, 1980.



HITCHCOCK COUNTY

401458100542201. Local number 3N-32W-11BB.

LOCATION.--Lat 40°14'58", long 100°54'22", NW1/4NW1/4 sec.11, T.3 N., R.32 W., Hydrologic Unit 10250005, 3 mi west and 1 mi north of Culbertson. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 18 ft, screened 16 to 18 ft.

DATUM.--Altitude of land-surface datum is 2,615 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

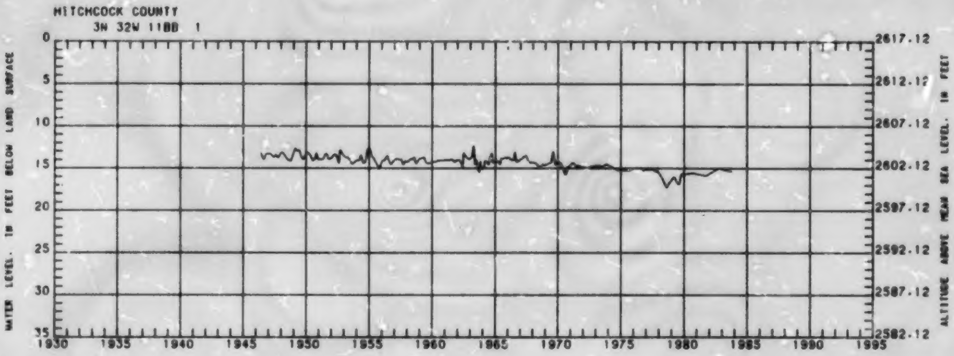
REMARKS.--Water levels in well affected by pumping of nearby irrigation wells and seepage from irrigation canals.

PERIOD OF RECORD.--May 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.65 ft below land-surface datum, Feb. 8, 1949; lowest, 17.30 ft below land-surface datum, Aug. 10, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	15.36										



HOLT COUNTY

421605098202001. Local number 27N-9W-34DA.

LOCATION.--Lat 42°16'05", long 98°20'30", NE1/4SE1/4 sec.34, T.27 N., R.9 W., Hydrologic Unit 10220001, 0.5 mi north of Ewing. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 17 ft, screened 15 to 17 ft.

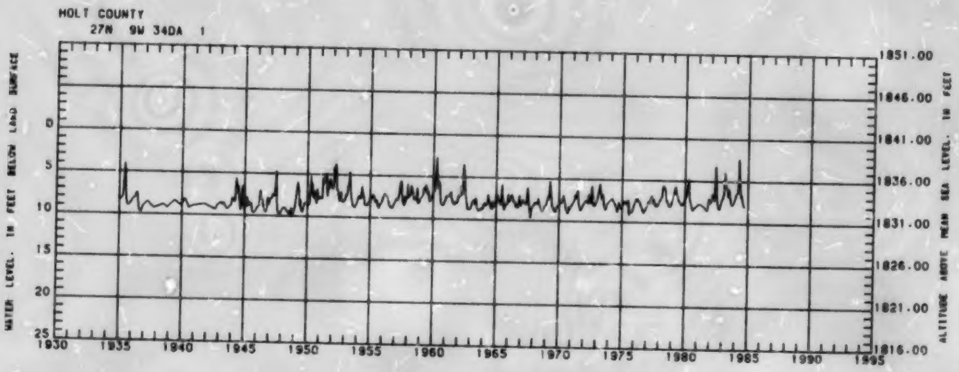
DATUM.--Altitude of land-surface datum is 1,841 ft. Measuring point: Top of casing 1.10 ft above land-surface datum.

PERIOD OF RECORD.--December 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.34 ft below land-surface datum, Apr. 9, 1984; lowest, 9.90 ft below land-surface datum, Sept. 1, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	7.77	JAN 4	6.60	APR 9	2.34	MAY 17	5.98	JUN 25	6.67	AUG 29	7.90
NOV 2	7.59	MAR 14	6.31	APR 25	4.77	JUN 7	6.93	JUL 17	7.36	SEP 19	8.04
DEC 20	7.03	APR 5	4.46								



HOLT COUNTY

422845098370701. Local number 29N-11W-21BBB.

LOCATION.--Lat 42°28'45", long 98°37'07", NW1/4NW1/4NW1/4 sec.21, T.29 N., R.11 W., Hydrologic Unit 10150007, 1 mi east and 1 mi north of O'Neill. Owner: Murphy.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled stock water-table well, diameter 5 in, depth 55 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,001.06 ft. Measuring point: Top of casing 1.20 ft above land-surface datum.

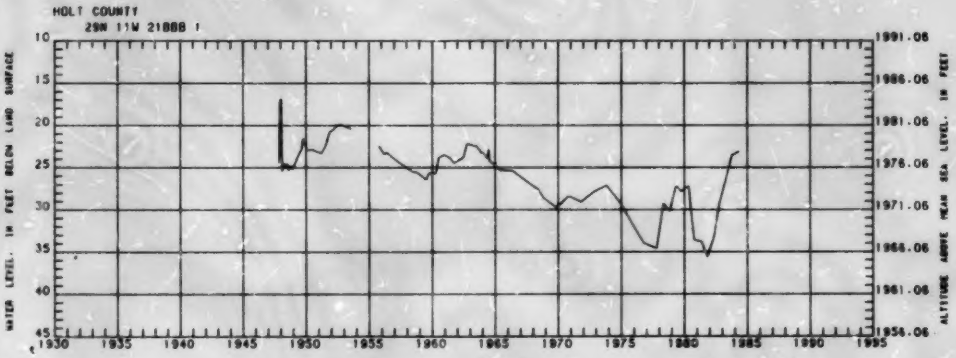
REMARKS.--Water levels in well affected by pumping of nearby wells during irrigation season.

PERIOD OF RECORD.--November 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.87 ft below land-surface datum, Jan. 14, 1948; lowest, 35.59 ft below land-surface datum, Oct. 28, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	23.58	APR 25	23.11								



HOLT COUNTY

423148098300601. Local number 30N-10W-32DAA.

LOCATION.--Lat 42°31'48", long 98°30'06", NE1/4NE1/4SE1/4 sec.32, T.30 N., R.10 W., Hydrologic Unit 10150007, 2 mi east on paved road from O'Neill, then 2 mi north, 4 mi east, 2 mi north, 2 mi east, and 0.5 mi north. Owner: William J. Murphy.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 85 ft, perforated 25.5 to 85 ft.

DATUM.--Altitude of land-surface datum is 1,952 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Water levels in this well affected by withdrawals by nearby irrigation wells completed in this aquifer and withdrawals from a deeper aquifer which has resulted in water movement from the upper aquifer to the deeper aquifer.

PERIOD OF RECORD.--October 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.41 ft below land-surface datum, Oct. 21, 1966; lowest, 53.73 ft below land-surface datum, Sept. 17, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	49.99	49.77	49.57	49.30	49.13	48.88	48.61	47.98	46.99	46.17	46.07	46.23
10	49.95	49.75	49.51	49.32	49.05	48.86	48.54	47.81	46.85	46.12	46.07	46.20
15	49.92	49.73	49.49	49.27	49.03	48.84	48.49	47.70	46.68	46.12	46.10	46.24
20	49.89	49.65	49.48	49.24	49.03	48.75	48.38	47.55	46.52	46.08	46.15	46.12
25	49.89	49.62	49.44	49.19	48.94	48.70	48.24	47.36	46.37	46.16	46.22	46.15
EOM	49.81	49.59	49.37	49.13	48.93	48.67	48.13	47.18	46.26	46.11	46.20	46.07

WTR YEAR 1984 MAX 46.04 AUG 8 and 9, 1984 MIN 50.01 OCT 1, 1983

HOLT COUNTY

423730098560001. Local number 31N-14W-27DDD.

LOCATION.--Lat 42°37'30", long 98°56'00", SE1/4SE1/4SE1/4 sec.27, T.31 N., R.14 W., Hydrologic Unit 10150007, 6 mi north from Atkinson on Route 11, then 2 mi east. Owner: Elmer Goldfuss.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 72 ft, perforated 32 to 72 ft.

DATUM.--Altitude of land-surface datum is 2,080 ft. Measuring point: Top of casing at land-surface datum.

REMARKS.--Water levels in well affected by pumping of nearby wells during irrigation season.

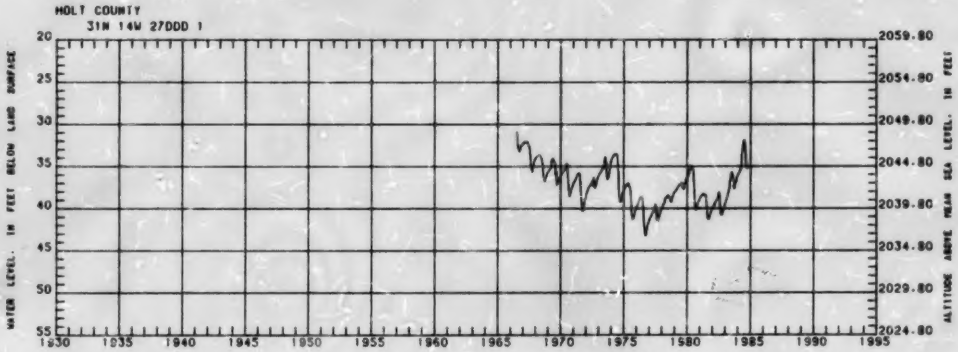
PERIOD OF RECORD.--July 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.91 ft below land-surface datum, July 7, 1966; lowest, 43.30 ft below land-surface datum, Sept. 10, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	37.29	36.67	36.26	35.95	35.74	35.48	34.96	33.24	32.23	32.13	33.42	35.18
10	37.19	36.59	36.21	35.96	35.67	35.47	34.76	33.01	32.17	32.27	33.80	35.26
15	37.06	36.52	36.15	35.94	35.63	35.43	34.52	32.86	32.06	32.37	34.34	35.34
20	36.98	36.42	36.13	35.89	35.62	35.32	34.17	32.67	31.97	32.70	34.71	35.20
25	36.89	36.37	36.10	35.82	35.55	35.24	33.82	32.53	31.88	33.03	34.72	35.10
EOM	36.75	36.31	36.01	35.81	35.54	35.12	33.52	32.38	31.86	33.12	34.95	34.99

WTR YEAR 1984 MAX 31.80 JUN 28, 1984 MIN 37.40 OCT 1, 1983



KEARNEY COUNTY

402625098594501. Local number 6N-15W-34DC.

LOCATION.--Lat 40°26'25", long 98°59'45", SW1/4SE1/4 sec.34, T.6 N., R.15 W., Hydrologic Unit 10270206, 4.5 mi south and 2.5 mi west of the junction of Route 10 and U.S. Highway 34 near Minden. Owner: Conservation and Survey Division, University of Nebraska-Lincoln.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 210 ft, cased with steel, perforated 190 to 210 ft.

DATUM.--Altitude of land-surface datum is 2,210 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Replacement for 402615099000001, local number 5N-15W-3BA1, period of record August 1947 to September 1967. Water levels in well affected by seepage losses from nearby canals and by pumping of nearby wells during irrigation season.

PERIOD OF RECORD.--October 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 76.87 ft below land-surface datum, June 26, 1984; lowest, 119.43 ft below land-surface datum, Aug. 27, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	83.04	81.74	80.94	80.03	79.69	79.05	78.54	77.86	77.07	82.28	102.24	100.57
10	82.81	81.68	80.81	80.31	79.28	79.09	78.33	77.79	77.54	104.72	.....	90.87
15	82.42	81.51	80.73	80.18	79.26	78.92	78.50	77.95	77.30	100.63	.....	86.68
20	82.36	80.96	80.69	80.04	79.49	78.62	78.11	77.60	77.17	108.01	.....	84.83
25	82.39	81.11	80.80	79.62	79.12	78.49	77.95	77.58	77.13	112.65	.....	84.42
EOM	81.92	81.30	80.20	79.71	79.34	78.73	78.21	77.59	83.51	109.47	.....	83.82

WTR YEAR 1984 MAX 76.87 JUN 26, 1984 MIN 114.04 JUL 24, 1984

KEARNEY COUNTY

403358098553001. Local number 7N-14W-20BA.

LOCATION.--Lat 40°33'58", long 98°55'30", NE1/4NW1/4 sec.20, T.7 N., R.14 W., Hydrologic Unit 10270206, 1.4 mi east and 4.5 mi north of intersection of U.S. Highway 6 and State Highway 10 in Minden. Owner: George Burchell.

AQUIFER.--Sand deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in, depth 183 ft.

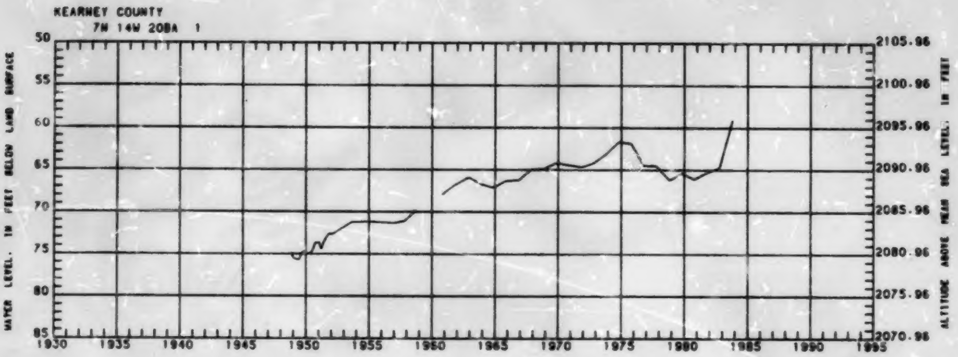
DATUM.--Altitude of land-surface datum is 2,155.96 ft. Measuring point: 0.30 ft above land-surface datum.

PERIOD OF RECORD.--October 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 59.06 ft below land-surface datum, Oct. 24, 1983; lowest, 75.75 ft below land surface datum, June 10, 1949.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	59.06										



KIMBALL COUNTY

411416103361101. Local number 15N-55W-26CC.

LOCATION.--Lat 41°14'16", long 103°36'11", SW1/4SW1/4 sec.26, T.15 N., R.55 W., Hydrologic Unit 10190016, east of intersection of U.S. Highway 30 and State Highway 71 in Kimball. Owner: Henry Meier.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in, depth 124 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 4,652.3 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

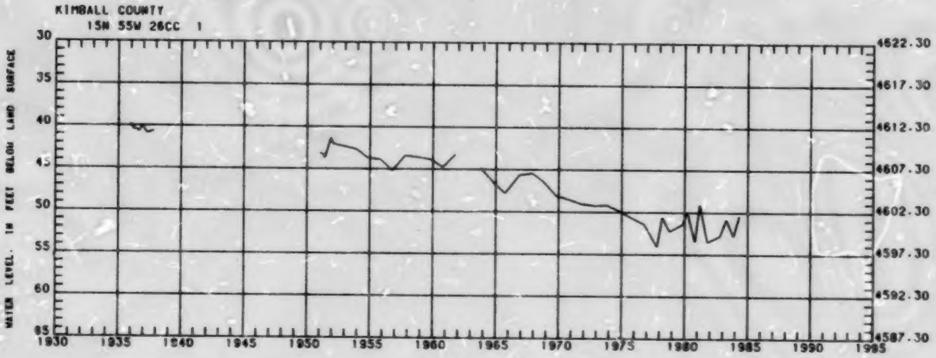
REMARKS.--Replacement for 411600103393501, local number 15N-55W-17CC1, period of record January 1935 to November 1942; June 1950 to October 1975.

PERIOD OF RECORD.--January 1936 to October 1937; January 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.82 ft below land-surface datum, Jan. 2, 1936; lowest, 54.07 ft below land-surface datum, Oct. 18, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	52.82	MAY 3	50.43								



LANCASTER COUNTY

403929096401001. Local number 8N-7E-18DDB.

LOCATION.--Lat 40°39'29", long 96°40'10", NW1/4SE1/4SE1/4 sec.18, T.8 N., R.7 E., Hydrologic Unit 10200203, 0.6 mi west of Roca. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 41 ft, perforated 36 to 41 ft.

DATUM.--Altitude of land-surface datum is 1,215 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

REMARKS.--Water level not measured during 1984 water year.

PERIOD OF RECORD.--June 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.63 ft below land-surface datum, Aug. 25, 1954; lowest, 13.24 ft below land-surface datum, Nov. 9, 1981.

LANCASTER COUNTY

403833096385501. Local number 8N-7E-20DDA.

LOCATION.--Lat 40°38'33", long 96°38'55", NE1/4SE1/4SE1/4 sec.20, T.8 N., R.7 E., Hydrologic Unit 10200203, 0.5 mi east and 1.1 mi south of Roca. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 33 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,243 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Water level not measured during 1984 water year.

PERIOD OF RECORD.--June 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.16 ft below land-surface datum, Mar. 27, 1960; lowest, 12.28 ft below land-surface datum, Oct. 17, 1980.

LANCASTER COUNTY

404730096440401. Local number 10N-6E-34CA.

LOCATION.--Lat 40°47'30", long 96°44'04", NE1/4SW1/4 sec.34, T.10 N., R.6 E., Hydrologic Unit 10200203, 0.3 mi west of intersection of Folsom and South Streets in Lincoln. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 36 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,149 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

PERIOD OF RECORD.--December 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.74 ft below land-surface datum, Oct. 3, 1983; lowest, 18.53 ft below land-surface datum, Feb. 20, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	8.74										

LANCASTER COUNTY

404706096413001. Local number 10N-6E-36CDD.

LOCATION.--Lat 40°47'06", long 96°41'30", SE1/4SE1/4SW1/4 sec.36, T.10 N., R.6 E., Hydrologic Unit 10200203, in Irvingdale Park on the north side of Van Dorn Street between 19th and 20th Streets in Lincoln. Owner: City of Lincoln.

AQUIFER.--Dakota Formation of Lower Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in, depth 170 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,200 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

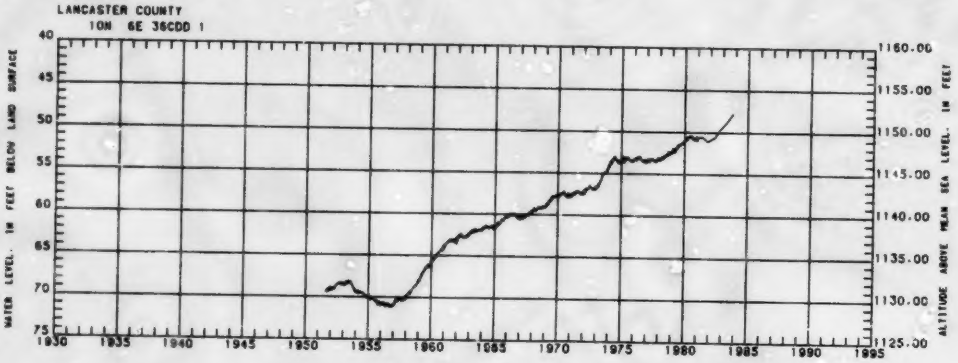
REMARKS.--Recorder removed in January 1983. Well measured in spring and fall thereafter.

PERIOD OF RECORD.--August 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 47.21 ft below land-surface datum, May 10, 1984; lowest 71.19 ft below land-surface datum, Sept. 5, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	47.83	MAY 10	47.21								



MERRICK COUNTY

410143098090301. Local number 12N-7W-7AA.

LOCATION.--Lat 41°01'43", long 98°09'03", NE1/4NE1/4 sec.7, T.12 N., R.7 W., Hydrologic Unit 10200103, 0.5 mi north and 0.5 mi west of Chapman. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 13 ft, screened 11 to 13 ft.

DATUM.--Altitude of land-surface datum is 1,762.16 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

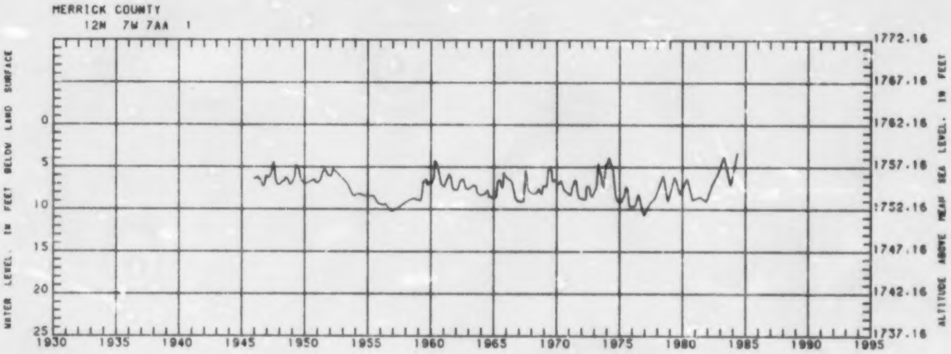
REMARKS.--Water levels in well affected by pumping of nearby wells during irrigation season and by evapotranspiration.

PERIOD OF RECORD.--December 1945 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.31 ft below land-surface datum, May 4, 1984; lowest, 10.75 ft below land-surface datum, Dec. 3, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	7.18	MAY 4	3.31								



MORRILL COUNTY

414058103054001. Local number 20N-50W-28BBC.

LOCATION.--Lat 41°40'58", long 103°05'40", SW1/4NW1/4NW1/4 sec.28, T.20 N., R.50 W., Hydrologic unit 10180009, 0.1 mi west of Northport. Owner: Fred Smith.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 1.25 in, depth 28 ft, screened 25 to 28 ft.

DATUM.--Altitude of land-surface datum is 3,675 ft. Measuring point: Top of casing 2.0 ft above land-surface datum.

REMARKS.--Replacement for well 414107103054501, local number 20N-50W-28BB with period of record September 1934 to November 1942; November 1944 to November 1980.

PERIOD OF RECORD.--October 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.63 ft below land-surface datum, Mar. 23, 1984; lowest, 15.68 ft below land-surface datum, Mar. 18, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	14.97	MAR 23	14.63								

NUCKOLLS COUNTY

400240098111301. Local number 1N-8W-23AB.

LOCATION.--Lat 40°02'40", long 98°11'13", NW1/4NE1/4 sec.23, T.1 N., R.8 W., Hydrologic Unit 10250016, 0.5 mi south and 0.5 mi west of Bostwick. Owner: U.S. Geological Survey.

AQUIFER.--Loess of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 18 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,598.15 ft. Measuring point: Top of casing 1.50 ft above land-surface datum.

PERIOD OF RECORD.--April 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.02 ft below land-surface datum, July 29, 1951; lowest, 7.85 ft below land-surface datum, Apr. 30, 1950.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	3.77	MAY 9	3.49								

PHELPS COUNTY

403123099261501. Local number 6N-19W-2AA.

LOCATION.--Lat 40°31'23", long 99°26'15", NE1/4NE1/4 sec.2, T.6 N., R.19 W., Hydrologic Unit 10200101, 10 mi east of Bertrand. Owner: Central Nebraska Public Power and Irrigation District.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 151 ft, screened 149 to 151 ft.

DATUM.--Altitude of land-surface datum is 2,360.81 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Water levels in well affected by seepage losses from nearby irrigation canal.

PERIOD OF RECORD.--March 1945 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.15 ft below land-surface datum, May 14, 1984; lowest, 123.70 ft below land-surface datum, Mar. 9, 1945.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	46.44	JAN 11	46.96	MAR 8	47.48	MAY 14	46.15	JUL 6	47.49	SEP 5	54.24
NOV 3	46.37										

PLATTE COUNTY

412955097192001. Local number 18N-1E-28CD.

LOCATION.--Lat 41°29'55", long 97°19'20", SE1/4SW1/4 sec.28, T.18 N., R.1 E., Hydrologic Unit 10200201, 3 mi south and 8.5 mi east of Platte Center. Owner: Loup River Public Power District.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2 in, depth 99 ft, screened 97 to 99 ft.

DATUM.--Altitude of land-surface datum is 1,511.8 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

PERIOD OF RECORD.--November 1935 to August 1940; March 1942 to November 1953; November 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 60.30 ft below land-surface datum, Mar. 27, 1940; lowest, 72.81 ft below land-surface datum, Oct. 9, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	68.00										

SALINE COUNTY

403855097072501. Local number 8N-3E-19ADA.

LOCATION.--Lat 40°38'55", long 97°07'25", NE1/4SE1/4NE1/4 sec.19, T.8 N., R.3 E., Hydrologic Unit 10270202, west edge of Dorchester, on west side of Route 15 between U.S. Highway and Route 33. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 151 ft, perforated 142 to 151 ft.

DATUM.--Altitude of land-surface datum is 1,496 ft. Measuring point: Top of casing at land-surface datum.

REMARKS.--Water levels in well affected by pumping of nearby wells during irrigation season.

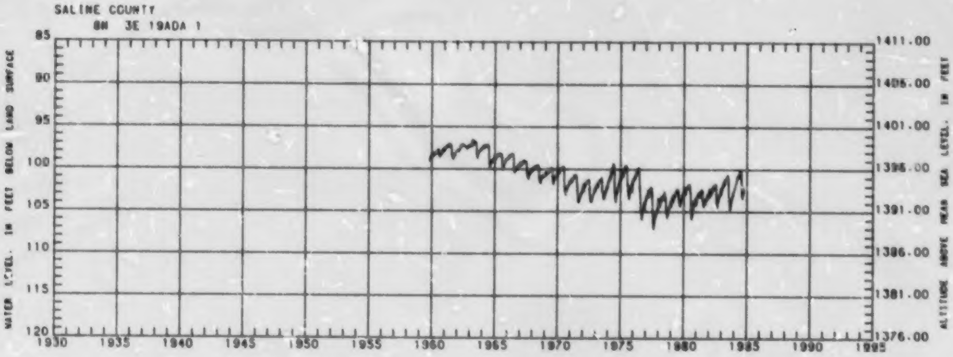
PERIOD OF RECORD.--October 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 96.56 ft below land-surface datum, Mar. 16, 1963; lowest, 107.15 ft below land-surface datum, Aug. 25, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	103.71	103.10	102.73	.....	.....	.....	.....	100.93	100.21	100.23	102.23	103.04
10	103.77	103.15	102.63	.....	101.77	.....	.....	100.66	100.87	100.13	103.14	102.70
15	103.35	103.15	102.68	.....	.....	.....	.....	101.01	100.57	100.34	103.30	103.08
20	103.39	102.67	.....	102.30	.....	.....	.....	100.56	100.45	101.17	103.53	102.18
25	103.59	102.82	.....	.....	.....	.....	.....	100.74	100.43	101.49	103.14	102.67
EOM	103.10	103.15	.....	.....	.....	.....	.....	100.44	100.40	101.83	103.08	102.15

WTR YEAR 1984 MAX 99.89 JUL 9, 1984 MIN 103.53 AUG 20, 1984



SAUNDERS COUNTY

410426096220401. Local number 13N-9E-24CC.

LOCATION.--Lat 41°04'26", long 96°22'04", SW1/4SW1/4 sec.24, T.13 N., R.9 E., Hydrologic Unit 10200202, 2 mi north of Ashland. Owner: City of Lincoln.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 12 ft, screened 10 to 12 ft.

DATUM.--Altitude of land-surface datum is 1,065.22 ft. Measuring point: Top of casing 4.50 ft above land-surface datum.

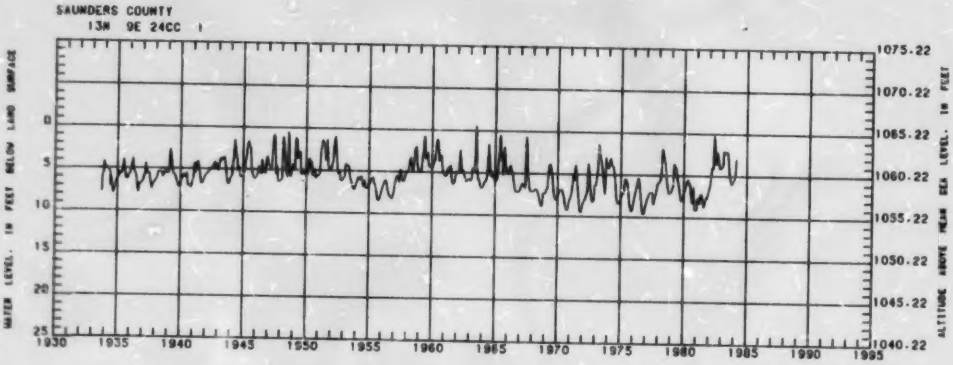
REMARKS.--Water levels affected by pumping of nearby wells in City of Lincoln well field.

PERIOD OF RECORD.--October 1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.20 ft below land-surface datum, May 25, 1982; lowest, 9.65 ft below land-surface datum, Oct. 18, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	5.95	NOV 25	5.56	DEC 25	5.54	JAN 25	4.86	FEB 25	3.02		



SAUNDERS COUNTY

411005096281502. Local number 14N-8E-24ACD2.

LOCATION.--Lat 41°10'05", long 96°28'15", SE1/4SW1/4NE1/4 sec.24, T.14 N., R.8 E., Hydrologic Unit 10200203, 4 mi south from the intersection of Routes 92 and 692 near Mead, then 0.65 mi east and 0.4 mi south to the south end of load line 2 of the Mead Field Station. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 80 ft, screened 60 to 80 ft.

DATUM.--Altitude of land-surface datum is 1,171 ft. Measuring point: Top of casing 0.5 ft above land-surface datum.

REMARKS.--Replacement for well 411005096281501, local number 14N-8E-24ACD1, with period of record July 1964 to November 1970. Water levels in well affected by pumping of nearby wells during irrigation season.

PERIOD OF RECORD.--April 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 42.15 ft below land-surface datum, Sept. 30, 1984; lowest, 46.98 ft below land-surface datum, Sept. 25, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	44.37	44.25	44.15	44.05	43.97	43.89	43.82	43.71	43.51	43.04	.....	42.26
10	44.37	44.23	44.14	44.09	43.93	43.92	43.81	43.68	43.49	.....	.....	42.23
15	44.33	44.23	44.14	44.06	43.94	43.94	43.82	43.64	43.35	.....	.....	42.28
20	44.32	44.17	44.13	44.05	43.97	43.85	43.77	43.60	43.23	.....	.....	42.19
25	44.33	44.15	44.12	44.00	43.93	43.84	43.78	43.61	43.11	.....	42.31	42.24
EOM	44.27	44.19	44.07	44.04	43.92	43.87	43.77	43.52	43.05	.....	42.22	42.16

WTR YEAR 1984 MAX 42.15 SEP 30, 1984 MIN 44.42 OCT 8, 1983

SCOTTSBLUFF COUNTY

415325103392801. Local number 22N-55W-11DDC.

LOCATION.--Lat 41°53'25", long 103°39'28", SW1/4NE1/4NE1/4 sec.11, T.22 N., R.55 W., Hydrologic Unit 10180009, 0.5 mi north of the west intersection of Routes 71 and 26 in Scottsbluff, then 0.8 mi east. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 32 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,953 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

REMARKS.--Recorder removed in January 1984. Well measured monthly thereafter.

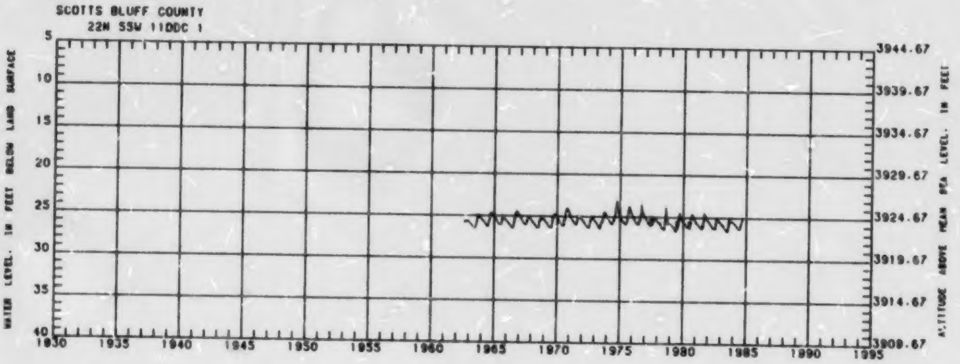
PERIOD OF RECORD.--August 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.05 ft below land-surface datum, Sept. 25, 1974; lowest, 26.72 ft below land-surface datum, May 31, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	25.28	OCT 20	25.32	NOV 5	25.41	NOV 20	25.42	MAR 23	26.00H	JUL 19	25.79H
OCT 10	25.28	OCT 25	25.33	NOV 10	25.40	DEC 29	25.60	APR 16	26.13H	AUG 20	25.34H
OCT 15	25.32	OCT 31	25.34	NOV 16	25.42H	JAN 5	25.63H	JUN 14	26.39H	SEP 26	24.96H

H TAPE MEASUREMENT



SCOTTSBLUFF COUNTY

420000103511501. Local number 23N-56W-6AA.

LOCATION.--Lat 42°00'00", long 103°51'15", NE1/4NE1/4 sec.6, T.23 N., R.56 W., Hydrologic Unit 10180009, 4 mi north and 2 mi west of intersection of U.S. Highway 26 and State Highway 29 in Mitchell. Owner: Carl Gompert.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 6 in, depth 118 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 4,087.7 ft. Measuring point: Hole in pump base 0.7 ft above land-surface datum.

REMARKS.--Water levels affected by withdrawals during irrigation season.

PERIOD OF RECORD.--November 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.24 ft below land-surface datum, Oct. 26, 1949; lowest, 41.72 ft below land-surface datum, Mar. 14, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	40.04	MAR 20	41.03								

SEWARD COUNTY

405406097115001. Local number 11N-2E-21DD.

LOCATION.--Lat 40°54'06", long 97°11'50", SE1/4SE1/4 sec.21, T.11 N., R.2 E., Hydrologic Unit 10270201, 4.5 mi west of Seward. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 123 ft, perforated 112 to 123 ft.

DATUM.--Altitude of land-surface datum is 1,550 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

REMARKS.--Water levels in well affected by withdrawals from nearby irrigation wells.

PERIOD OF RECORD.--May 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 76.37 ft below land-surface datum, Dec. 20, 1965; lowest, 90.17 ft below land-surface datum, Aug. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	86.92	85.92	85.38	.....	.....	83.68	.....	.....	81.66	81.40	.....	85.59
10	86.57	85.85	85.11	84.95	83.86	83.83	83.05	82.56	82.13	81.41	.....	84.92
15	86.30	85.78	85.26	84.87	83.71	83.61	83.13	82.76	81.96	81.88	86.42	.....
20	86.35	85.25	85.26	84.70	84.11	.....	82.90	82.33	81.85	82.80	86.89	.....
25	86.49	85.30	.....	84.32	83.74	.....	82.65	82.35	81.80	.....	86.24	.....
EOM	86.05	85.75	.....	.....	84.01	.....	82.94	82.10	81.63	.....	85.76	.....

WTR YEAR 1984 MAX 81.16 JUL 9, 1984 MIN 87.05 OCT 1, 1983

SHERIDAN COUNTY

423034102415001. Local number 29N-46W-10AA.

LOCATION.--Lat 42°30'34", long 102°41'50", NE1/4NE1/4 sec.10, T.29 N., R.46 W., Hydrologic Unit 10150003, at Mirage Flats project headquarters, 11.5 mi south of Hay Springs. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 100 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,794.5 ft. Measuring point: Top of casing 1.5 ft above land-surface datum.

REMARKS.--Water levels affected by seepage losses from nearby irrigation canal and laterals and by withdrawals from nearby irrigation wells.

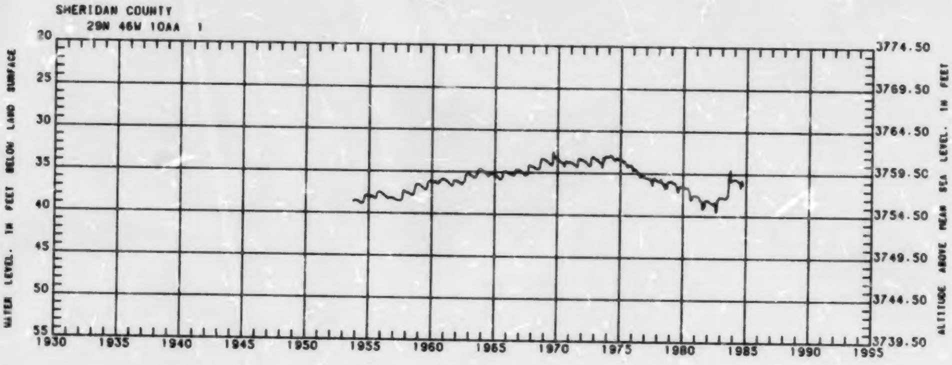
PERIOD OF RECORD.--September 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.47 ft below land-surface datum, Aug. 25, 1969; lowest, 39.57 ft below land-surface datum, Aug. 7, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	35.90	35.79	35.73	35.60	35.62	35.66	35.71	35.80	35.90	36.12	36.34	35.89
10	35.92	35.79	35.68	35.62	35.57	35.67	35.70	35.81	35.95	36.22	36.15	36.02
15	35.86	35.77	35.70	35.60	35.65	35.70	35.76	35.86	.....	36.40	35.72	36.10
20	35.89	35.70	.....	35.60	35.63	35.67	35.81	35.87	35.98	.....	35.64	36.20
25	35.89	35.70	.....	35.65	35.68	35.65	35.75	35.91	36.04	36.65	35.95	36.30
EOM	35.81	35.74	.....	35.61	35.62	35.72	35.83	35.87	36.06	36.12	36.14	36.22

WTR YEAR 1984 MAX 35.55 FEB 9, 1984 MIN 36.80 JUL 23, 1984



THOMAS COUNTY

415845100334001. Local number 23N-28W-9DA.

LOCATION.--Lat 41°58'45", long 100°33'40", NE1/4SE1/4 sec.9, T.23 N., R.28 W., Hydrologic Unit 10210001, 1 mi east of courthouse in Thedford. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 15 ft, screened from 13 to 15 ft.

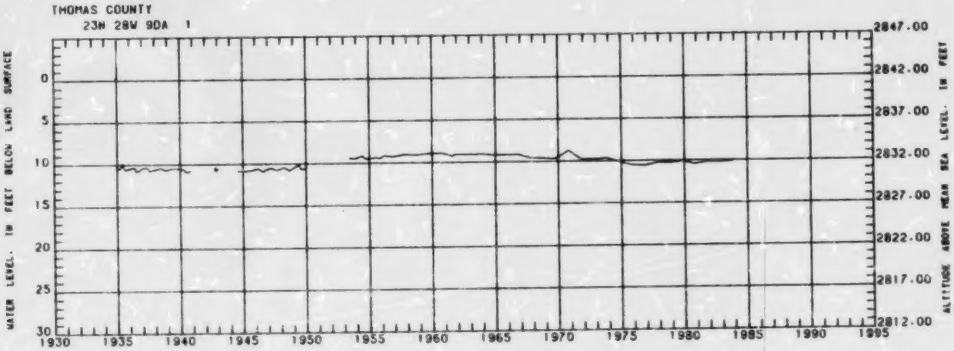
DATUM.--Altitude of land-surface datum is 2,842 ft. Measuring point: Top of pipe 2.3 ft above land-surface datum.

PERIOD OF RECORD.--December 1934 to November 1942; August 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.73 ft below land-surface datum, Oct. 16, 1970; lowest, 10.98 ft below land-surface datum, July 23, 1940.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	10.07										



VALLEY COUNTY

412955099123201. Local number 18N-16W-30CC.

LOCATION.--Lat 41°29'55", long 99°12'32", SW1/4SW1/4 sec.30, T.18 N., R.16 W., Hydrologic Unit 10210003, 4 mi west and 5 mi north of Arcadia. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 15 ft, screened from 13 to 15 ft.

DATUM.--Altitude of land-surface datum is 2,217.61 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

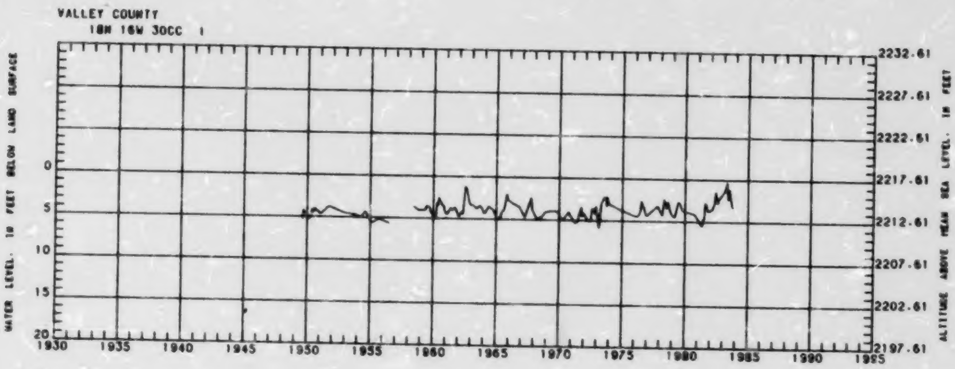
REMARKS.--Water levels in well affected by evapotranspiration.

PERIOD OF RECORD.--August 1949 to June 1956; June 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.25 ft below land-surface datum, May 3, 1983; lowest, 5.90 ft below land-surface datum, Mar. 1, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	3.17	OCT 17	3.28								



WEBSTER COUNTY

400423098314001. Local number 1N-11W-11AB.

LOCATION.--Lat 40°04'23", long 98°31'40", NW1/4NE1/4 sec.11, T.1 N., R.11 W., Hydrologic Unit 10250016, 1 mi south and 0.25 mi west of intersection of U.S. Highways 136 and 281 in Red Cloud. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 16.9 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,686 ft. Measuring point: Top of casing 1.1 ft above land-surface datum.

PERIOD OF RECORD.--May 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.34 ft below land-surface datum, July 11, 1951; lowest, 10.56 ft below land-surface datum, Apr. 5, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	3.39	MAY 8	3.26								

YORK COUNTY

404618097482201. Local number 9N-4W-5CCC.

LOCATION.--Lat 40°46'18", long 97°48'22", SW1/4SW1/4SW1/4 sec.5, T.9 N., R.4 W., Hydrologic Unit 10270203, 0.5 mi south of Henderson. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 170 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,708 ft. Measuring point: Top of casing 1.50 ft above land-surface datum.

REMARKS.--Replacement for well 404620097482501, local number 9N-4W-6DD with period of record May 1959 to September 1981 located on east side of highway across from old well.

PERIOD OF RECORD.--April 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 80.10 ft below land-surface datum, July 17, 1984; lowest, 87.52 ft below land-surface datum, Aug. 20, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	84.75	83.82	.....	.....	.....	.....	81.45	.....	.....	80.28	82.19	82.84
10	84.57	83.85	.....	.....	.....	.....	81.37	80.87	80.66	80.29	82.54	82.77
15	84.50	83.83	.....	.....	82.67	81.96	81.36	80.81	80.41	80.92	82.80	82.78
20	84.31	83.53	.....	82.70H	82.20	81.63	81.24	80.72	80.31	81.03	83.25	82.39
25	84.33	83.36	.....	.....	81.99	81.56	81.13	80.81	80.26	81.36	83.11	82.61
EOM	83.91	.....	.....	.....	.....	81.53	81.33	80.60	80.26	81.93	83.01	82.20

WTR YEAR 1984 MAX 80.10 JUL 7, 1984 MIN 84.85 OCT 9, 1983

H TAPE MEASUREMENT

YORK COUNTY

405305097351503. Local number 11N-2W-31BA3.

LOCATION.--Lat 40°53'05", long 97°35'15", NE1/4NW1/4 sec.31, T.11 N., R.2 W., Hydrologic Unit 10270203, south edge of York County Fairgrounds on the north side of York. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 165 ft, perforated below water table.

DATUM.--Altitude of land-surface datum is 1,659 ft. Measuring point: Top of casing 1.6 ft above land-surface datum.

REMARKS.--Replacement for well 405305097351501, local number 11N-2W-31BA1, with period of record October 1957 to January 1969. Water levels in well affected by withdrawals from nearby municipal well and by withdrawals from nearby irrigation wells.

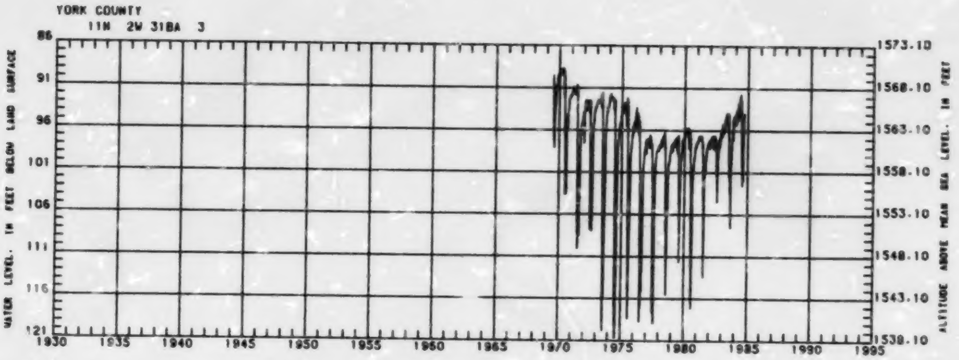
PERIOD OF RECORD.--May 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 88.65 ft below land-surface datum, Apr. 20, 1970; lowest, 120.81 ft below land-surface datum, July 15, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	97.45	95.08	.....	.....	93.86	93.85	94.72	92.34	91.67	.....	99.61	95.41
10	96.36	97.17	.....	.....	93.71	.....	92.60	.....	93.90	.....	100.10	94.75
15	96.94	96.00	.....	.....	95.12	94.57	94.17	.....	92.47	.....	101.73	94.08
20	96.71	94.69	.....	94.09	93.61	.....	92.86	.....	.....	99.14	102.02	94.12
25	96.77	94.29	.....	94.25	93.42	.....	94.34	.....	.....	98.73	97.43	93.98
EOM	95.27	94.67	.....	95.42	93.63	.....	94.34	.....	.....	102.64	97.36	94.34

WTR YEAR 1984 MAX 91.54 JUN 7, 1984 MIN 102.64 JUL 31, 1984



(Local identifier: indicates location by township, range, and section. Geologic unit: 112 SDGV, sand and gravel deposits; 122 HRSN, Harrison Sandstone; 121 OGLL, Ogallala Formation; 122 ARKR, Arikaree Group; 122 SPCK, Sheep Creek Formation; 211 DKOT, Dakota Formation; 112 SDHL, Sandhills Deposit; 110 QRNR, Quaternary System; 110 WDBS, Windblown Sand Deposits, Undifferentiated; 111 ALVM, Holocene Alluvium)

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	LOCAL IDENT- I- FIER	LAT- I- TUDE	LONG- I- TUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUC- TANCE (UMHOS) (00095)
					ANTELOPE				
415955098061901	23N 7W 3AA001	41 59 55	098 06 19	01	112SDGV	84-08-07	0945	260	503
420100097563401	24N 5W31BAAB1	42 01 00	097 56 34	01	112SDGV	84-08-07	0850	120	471
					BOX BUTTE				
420504102502101	24N 48W 2AD 1	42 05 04	102 50 21	01	122HRSN	84-09-06	--	130	1450
420420102574501	24N 49W11AB 1	42 04 20	102 57 45	01	121OGLL	84-09-08	--	100	1900
420420102574502	24N 49W11AB 2	42 04 20	102 57 45	02	122ARKR	84-09-08	--	200	1540
420618103223001	25N 52W34ABBB1	42 06 18	103 22 30	01	122ARKR	84-09-07	--	165	373
421417102521701	26N 48W12DC 1	42 14 17	102 52 17	01	122ARKR	84-09-07	--	397	485
421537103042701	26N 49W 6AAD 1	42 15 37	103 04 27	01	122ARKR	84-09-07	--	260	438
421422103161901	26N 51W 9DD 1	42 14 22	103 16 19	01	122ARKR	84-09-07	--	400	340
421932103015601	27N 49W10CBCC1	42 19 32	103 01 56	01	122ARKR	84-09-07	--	312	505
421904103080801	27N 50W15AD 1	42 19 04	103 08 08	01	122ARKR	84-09-07	--	372	428
421936103215901	27N 52W10AD 1	42 19 36	103 21 59	01	122ARKR	84-09-07	--	330	318
422305102520601	28N 47W30BB 1	42 23 05	102 52 06	01	122SPCK	84-09-06	--	250	703
					BROWN				
423107099423501	29N 20W 6BAC 1	42 31 07	099 42 35	01	112SDGV	83-10-07	1030	--	113
						84-06-13	1700	--	110
						84-07-26	1030	--	113
423252099510901	30N 22W26AAA 1	42 32 52	099 51 09	01	112SDGV	83-10-05	0850	55.00	214
						84-06-14	0825	55.00	220
						84-07-25	1445	55.00	226
423259099515701	30N 22W26BAB 1	42 32 59	099 51 57	01	121OGLL	83-10-06	0825	360	--
						84-07-25	1415	360	213
423415100032401	30N 23W18ACC 1	42 34 15	100 03 24	01	112SDGV	83-10-05	1420	--	118
						84-06-14	0850	--	103
423944099490901	31N 21W18AAC 1	42 39 44	099 49 09	01	121OGLL	84-07-25	1220	330	204
					BUFFALO				
404456098502201	9N 14W13DAB 1	40 44 56	098 50 22	01	112SDGV	84-08-07	1330	220	980
404504098570101	9N 15W13ACDA1	40 45 04	098 57 01	01	112SDGV	84-08-07	1355	72.00	--
404236098595801	9N 15W34BA 1	40 42 36	098 59 58	01	112SDGV	84-08-07	1430	59.00	--
404708099101601	9N 16W 6BAA 1	40 47 08	099 10 16	01	112SDGV	84-08-08	1500	95.00	630
405506098465201	11N 13W16DD 1	40 55 06	098 46 52	01	112SDGV	84-08-08	1000	120	450
405915098514301	12N 14W26AB 1	40 59 15	098 51 43	01	112SDGV	84-08-08	1130	--	507
410022099081001	12N 16W16CC 1	41 00 22	099 08 10	01	112SDGV	84-08-08	1200	280	580
405751099181801	12N 17W31CAC 1	40 57 51	099 18 18	01	112SDGV	84-08-08	1400	164	507
					BURT				
414714096302801	21N 8E28CCDB1	41 47 14	096 30 28	01	211DKOT	84-08-08	1510	307	2250
415710096283101	23N 8E24BD 1	41 57 10	096 28 31	01	110SDGV	84-08-09	0940	86.00	800
					CHASE				
402204101520801	5N 40W28CDAA1	40 22 04	101 52 08	01	121OGLL	84-08-06	--	300	368
402840101295601	6N 37W22AAC 1	40 28 40	101 29 56	01	121OGLL	84-08-06	--	460	370
402812101471801	6N 39W19DBC 1	40 28 12	101 47 18	01	121OGLL	84-08-06	--	--	375
402925102001301	6N 41W17BBD 1	40 29 25	102 00 13	01	121OGLL	84-08-06	--	341	315
403244101213101	7N 36W25BDC 1	40 32 44	101 21 31	01	121OGLL	84-08-08	--	191	372
403230101390301	7N 38W29DD 1	40 32 30	101 39 03	01	121OGLL	84-08-06	--	270	359

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)
					ANTELOPE						
415955093061901	84-08-07	7.6	11.5	220	0	68	12	8.5	.3	17	251
420100097563401	84-08-07	7.5	11.5	210	0	65	12	8.6	.3	9.8	226
					BOX BUTTE						
420504102502101	84-09-06	7.0	13.0	360	0	94	30	150	4	27	408
420420102574501	84-09-08	6.7	12.0	420	6	110	36	240	5	40	417
420420102574502	84-09-08	6.8	12.0	340	0	85	31	210	5	26	465
420618103223001	84-09-07	7.3	12.0	160	0	47	9.2	15	.5	5.6	156
421417102521701	84-09-07	7.0	14.0	150	3	43	10	39	1	7.5	146
421537103042701	84-09-07	7.4	13.0	170	0	49	12	20	.7	7.2	177
421422103161901	84-09-07	7.4	14.0	150	10	44	9.2	12	.4	5.4	138
421932103015601	84-09-07	7.4	13.0	180	0	52	11	31	1	7.5	194
421904103080801	84-09-07	7.7	14.0	170	0	50	12	19	.7	7.8	177
421936103215901	84-09-07	7.2	11.0	150	7	46	7.5	9.4	.4	5.3	139
422305102520601	84-09-06	--	12.0	240	22	73	14	46	1	13	218
					BROWN						
423107099423501	83-10-07	--	12.5	39	0	13	1.6	4.8	.3	3.4	45
	84-06-13	7.1	14.5	42	0	14	1.7	4.8	.3	3.5	50
	84-07-26	7.5	12.5	39	0	13	1.6	4.4	.3	3.1	42
423252099510901	83-10-05	6.7	12.0	81	0	25	4.4	11	.6	5.3	80
	84-06-14	--	12.5	78	0	24	4.3	10	.5	5.5	85
	84-07-25	7.5	15.0	74	0	23	4.0	9.3	.5	5.5	75
423259099515701	83-10-06	7.6	13.0	85	0	27	4.3	7.3	.4	5.4	97
	84-07-25	7.6	15.0	83	0	27	3.9	5.7	.3	5.8	96
423415100032401	83-10-05	6.7	15.0	34	0	11	1.7	5.0	.4	2.7	36
	84-06-14	--	13.0	31	0	10	1.5	4.6	.4	2.5	38
423944099490901	84-07-25	7.4	16.0	81	0	27	3.3	5.7	.3	5.3	91
					BUFFALO						
404456098502201	84-08-07	7.1	12.0	390	145	120	22	49	1	9.9	246
404504098570101	84-08-07	6.9	12.0	810	382	250	45	200	3	26	429
404236098595801	84-08-07	6.8	12.0	570	320	170	36	99	2	11	254
404708099101601	84-08-08	7.0	13.0	330	40	110	14	8.8	.2	6.1	293
405506098465201	84-08-08	7.1	13.0	210	0	72	8.3	6.7	.2	3.6	231
405915098514301	84-08-08	7.2	13.0	250	0	80	12	10	.3	5.8	272
410022099081001	84-08-08	7.8	13.0	260	0	83	12	10	.3	7.9	277
405751099181801	84-08-08	7.0	15.0	240	0	78	9.8	9.8	.3	6.8	245
					BURT						
414714096302801	84-08-08	7.1	14.0	830	625	250	51	190	3	30	211
415710096283101	84-08-09	7.4	15.0	--	--	--	30	27	--	4.4	339
					CHASE						
402204101520801	84-08-06	7.3	15.0	170	1	45	14	12	.4	9.8	169
402840101295601	84-08-06	7.5	15.0	150	0	39	12	12	.4	9.3	151
402812101471801	84-08-06	8.4	15.0	160	0	40	14	13	.5	9.6	162
402925102001301	84-08-06	8.4	15.0	140	0	38	11	10	.4	7.6	146
403244101213101	84-08-08	7.3	13.0	170	0	49	11	11	.4	9.7	172
403230101390301	84-08-06	7.8	14.0	140	0	41	10	13	.5	8.1	149

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)
ANTELOPE											
415955098061901	84-08-07	11	1.2	.40	34	300	.41	--	.47	--	--
420100097563401	84-08-07	13	2.5	.40	35	280	.39	--	2.3	--	--
BOX BUTTE											
420504102502101	84-09-06	260	54	1.0	41	900	1.2	--	3.5	--	--
420420102574501	84-09-08	410	53	.60	52	1200	1.6	--	13	--	--
420420102574502	84-09-08	290	25	.80	55	1000	1.4	--	4.9	--	--
420618103223001	84-09-07	6.0	1.7	.50	54	230	.32	--	7.8	--	--
421417102521701	84-09-07	40	3.8	.80	60	290	.40	--	2.4	--	--
421537103042701	84-09-07	35	2.1	1.2	59	290	.40	--	2.5	--	--
421422103161901	84-09-07	16	5.3	.60	62	240	.32	--	3.3	--	--
421932103015601	84-09-07	51	6.4	.60	62	340	.46	--	2.7	--	--
421904103080801	84-09-07	31	3.6	.90	60	290	.40	--	2.5	--	--
421936103215901	84-09-07	12	5.1	.40	56	230	.31	--	2.4	--	--
422305102520601	84-09-06	77	33	.40	58	450	.61	--	5.7	--	--
BROWN											
423107099423501	83-10-07	3.7	.80	.20	52	110	.14	--	1.4	--	--
	84-06-13	3.9	.80	.20	53	110	.15	--	1.3	--	--
	84-07-26	4.2	.90	.20	51	100	.14	--	1.1	--	--
423252099510901	83-10-05	7.8	3.2	.20	52	160	.21	--	5.6	--	--
	84-06-14	7.7	3.1	.20	52	160	.21	--	5.0	--	--
	84-07-25	6.9	3.0	.20	51	150	.20	--	4.1	--	--
423259099515701	83-10-06	3.1	1.5	.30	59	170	.23	--	2.0	--	--
	84-07-25	2.2	5.2	.40	61	170	.23	--	.69	--	--
423415100032401	83-10-05	9.9	1.5	.10	37	90	.12	--	1.5	--	--
	84-06-14	7.0	.90	.20	37	86	.12	--	1.6	--	--
423944099490901	84-07-25	2.7	1.9	.30	60	160	.22	--	.98	--	--
BUFFALO											
404456098502201	84-08-07	180	36	.30	55	620	.84	--	7.0	--	--
404504098570101	84-08-07	450	130	.30	56	1400	1.9	--	45	--	--
404236098595801	84-08-07	330	56	.30	26	880	1.2	--	44	--	--
404708099101601	84-08-08	38	14	.30	54	420	.57	--	.32	--	--
405506098465201	84-08-08	7.8	5.6	.30	51	290	.40	--	.56	--	--
405915098514301	84-08-08	17	2.5	.30	54	340	.47	--	<.10	--	--
410022099081001	84-08-08	18	7.9	.20	55	360	.49	--	1.4	--	--
405751099181801	84-08-08	16	3.6	.30	53	320	.44	--	2.2	--	--
BURT											
414714096302801	84-08-08	840	130	2.1	8.7	1600	2.2	--	<.10	--	--
415710096283101	84-08-09	45	7.7	.30	28	--	--	--	.24	--	--
CHASE											
402204101520801	84-08-06	18	2.0	.70	63	270	.36	--	2.3	--	--
402840101295601	84-08-06	14	5.0	.80	57	240	.33	--	1.9	--	--
402812101471801	84-08-06	18	2.8	.90	56	250	.34	--	2.3	--	--
402925102001301	84-08-06	10	2.0	.90	52	220	.30	--	1.7	--	--
403244101213101	84-08-08	13	5.4	.70	59	260	.36	--	2.2	--	--
403230101390301	84-08-06	14	5.7	.80	54	240	.32	--	2.0	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90) (80050)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L) (80020)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
					ANTELOPE						
415955098061901	84-08-07	--	40	<3	1	--	--	--	--	--	--
420100097563401	84-08-07	--	40	<3	<1	--	--	--	--	--	--
					BOX BUTTE						
420504102502101	84-09-06	.30	--	--	--	--	--	--	--	--	--
420420102574501	84-09-08	<.20	--	--	--	--	--	--	--	--	--
420420102574502	84-09-08	.50	--	--	--	--	--	--	--	--	--
420618103223001	84-09-07	<.20	--	--	--	--	--	--	--	--	--
421417102521701	84-09-07	.50	--	--	--	--	--	--	--	--	--
421537103042701	84-09-07	.30	--	--	--	--	--	--	--	--	--
421422103161901	84-09-07	<.20	--	--	--	--	--	--	--	--	--
421932103015601	84-09-07	<.20	--	--	--	--	--	--	--	--	--
421904103080801	84-09-07	.20	--	--	--	--	--	--	--	--	--
421936103215901	84-09-07	<.20	--	--	--	--	--	--	--	--	--
422305102520601	84-09-06	<.20	--	--	--	--	--	--	--	--	--
					BROWN						
423107099423501	83-10-07	--	--	--	--	--	--	--	--	--	--
	84-06-13	--	--	--	--	--	--	--	--	--	--
	84-07-26	--	--	--	--	--	--	--	--	--	--
423252099510901	83-10-05	--	--	--	--	--	--	--	--	--	--
	84-06-14	--	--	--	--	--	--	--	--	--	--
	84-07-25	--	--	--	--	--	--	--	--	--	--
423259099515701	83-10-06	--	--	--	--	--	--	--	--	--	--
	84-07-25	--	--	--	--	--	--	--	--	--	--
423415100032401	83-10-05	--	--	--	--	--	--	--	--	--	--
	84-06-14	--	--	--	--	--	--	--	--	--	--
423944099490901	84-07-25	--	--	--	--	--	--	--	--	--	--
					BUFFALO						
404456098502201	84-08-07	.50	--	--	--	--	--	--	--	--	--
404504098570101	84-08-07	.50	--	--	--	--	--	--	--	--	--
404236098595801	84-08-07	.80	--	--	--	--	--	--	--	--	--
404708099101601	84-08-08	<.20	--	--	--	--	--	--	--	--	--
405506098465201	84-08-08	<.20	--	--	--	--	--	--	--	--	--
405915098514301	84-08-08	.20	--	--	--	--	--	--	--	--	--
410022099081001	84-08-08	.40	--	--	--	--	--	--	--	--	--
405751099181801	84-08-08	<.20	--	--	--	--	--	--	--	--	--
					BURT						
414714096302801	84-08-08	--	600	1400	100	--	--	--	--	--	--
415710096283101	84-08-09	--	50	360	480	--	--	--	--	--	--
					CHASE						
402204101520801	84-08-06	<.20	--	--	--	--	--	--	--	--	--
402840101295601	84-08-06	.20	--	--	--	--	--	--	--	--	--
402812101471801	84-08-06	.40	--	--	--	--	--	--	--	--	--
402925102001301	84-08-06	.20	--	--	--	--	--	--	--	--	--
403244101213101	84-08-08	.20	--	--	--	--	--	--	--	--	--
403230101390301	84-08-06	.20	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	DI-CHLORO-BROMO-METHANE TOTAL (UG/L) (32101)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L) (32102)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L) (32103)	BROM-OFORM TOTAL (UG/L) (32104)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L) (32105)	CHLORO-FORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLORO-BENZENE TOTAL (UG/L) (34301)	CHLORO-ETHANE TOTAL (UG/L) (34311)
					ANTELOPE						
415955098061901	84-08-07	--	--	--	--	--	--	--	--	--	--
420100097563401	84-08-07	--	--	--	--	--	--	--	--	--	--
					BOX BUTTE						
420504102502101	84-09-06	--	--	--	--	--	--	--	--	--	--
420420102574501	84-09-08	--	--	--	--	--	--	--	--	--	--
420420102574502	84-09-08	--	--	--	--	--	--	--	--	--	--
420618103223001	84-09-07	--	--	--	--	--	--	--	--	--	--
421417102521701	84-09-07	--	--	--	--	--	--	--	--	--	--
421537103042701	84-09-07	--	--	--	--	--	--	--	--	--	--
421422103161901	84-09-07	--	--	--	--	--	--	--	--	--	--
421932103015601	84-09-07	--	--	--	--	--	--	--	--	--	--
421904103080801	84-09-07	--	--	--	--	--	--	--	--	--	--
421936103215901	84-09-07	--	--	--	--	--	--	--	--	--	--
422305102520601	84-09-06	--	--	--	--	--	--	--	--	--	--
					BROWN						
423107099423501	83-10-07	--	--	--	--	--	--	--	--	--	--
	84-06-13	--	--	--	--	--	--	--	--	--	--
	84-07-26	--	--	--	--	--	--	--	--	--	--
423252099510901	83-10-05	--	--	--	--	--	--	--	--	--	--
	84-06-14	--	--	--	--	--	--	--	--	--	--
	84-07-25	--	--	--	--	--	--	--	--	--	--
423259099515701	83-10-06	--	--	--	--	--	--	--	--	--	--
	84-07-25	--	--	--	--	--	--	--	--	--	--
423415100032401	83-10-05	--	--	--	--	--	--	--	--	--	--
	84-06-14	--	--	--	--	--	--	--	--	--	--
423944099490901	84-07-25	--	--	--	--	--	--	--	--	--	--
					BUFFALO						
404456098502201	84-08-07	--	--	--	--	--	--	--	--	--	--
404504098570101	84-08-07	--	--	--	--	--	--	--	--	--	--
404236098595801	84-08-07	--	--	--	--	--	--	--	--	--	--
404708099101601	84-08-08	--	--	--	--	--	--	--	--	--	--
405506098465201	84-08-08	--	--	--	--	--	--	--	--	--	--
405915098514301	84-08-08	--	--	--	--	--	--	--	--	--	--
410022099081001	84-08-08	--	--	--	--	--	--	--	--	--	--
405751099181801	84-08-08	--	--	--	--	--	--	--	--	--	--
					BURT						
414714096302801	84-08-08	--	--	--	--	--	--	--	--	--	--
415710096283101	84-08-09	--	--	--	--	--	--	--	--	--	--
					CHASE						
402204101520801	84-08-06	--	--	--	--	--	--	--	--	--	--
402840101295601	84-08-06	--	--	--	--	--	--	--	--	--	--
402812101471801	84-08-06	--	--	--	--	--	--	--	--	--	--
402925102001301	84-08-06	--	--	--	--	--	--	--	--	--	--
403244101213101	84-08-08	--	--	--	--	--	--	--	--	--	--
403230101390301	84-08-06	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	ETHYL-BENZENE TOTAL (UG/L) (34371)	METHYL-BROMIDE TOTAL (UG/L) (34413)	METHYL-ENE CHLO-RIDE TOTAL (UG/L) (34423)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L) (34475)	TRI-CHLORO-FLOURO-METHANE TOTAL (UG/L) (34488)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L) (34501)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L) (34506)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L) (34511)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L) (34516)
ANTELOPE											
415955098061901	84-08-07	--	--	--	--	--	--	--	--	--	--
420100097563401	84-08-07	--	--	--	--	--	--	--	--	--	--
BOX BUTTE											
420504102502101	84-09-06	--	--	--	--	--	--	--	--	--	--
420420102574501	84-09-08	--	--	--	--	--	--	--	--	--	--
420420102574502	84-09-08	--	--	--	--	--	--	--	--	--	--
420618103223001	84-09-07	--	--	--	--	--	--	--	--	--	--
421417102521701	84-09-07	--	--	--	--	--	--	--	--	--	--
421537103042701	84-09-07	--	--	--	--	--	--	--	--	--	--
421422103161901	84-09-07	--	--	--	--	--	--	--	--	--	--
421932103015601	84-09-07	--	--	--	--	--	--	--	--	--	--
421904103056801	84-09-07	--	--	--	--	--	--	--	--	--	--
421936103215901	84-09-07	--	--	--	--	--	--	--	--	--	--
422305102520601	84-09-06	--	--	--	--	--	--	--	--	--	--
BROWN											
423107099423501	83-10-07	--	--	--	--	--	--	--	--	--	--
	84-06-13	--	--	--	--	--	--	--	--	--	--
	84-07-26	--	--	--	--	--	--	--	--	--	--
423252099510901	83-10-05	--	--	--	--	--	--	--	--	--	--
	84-06-14	--	--	--	--	--	--	--	--	--	--
	84-07-25	--	--	--	--	--	--	--	--	--	--
423259099515701	83-10-06	--	--	--	--	--	--	--	--	--	--
	84-07-25	--	--	--	--	--	--	--	--	--	--
423415100032401	83-10-05	--	--	--	--	--	--	--	--	--	--
	84-06-14	--	--	--	--	--	--	--	--	--	--
423944099490901	84-07-25	--	--	--	--	--	--	--	--	--	--
BUFFALO											
404456098502201	84-08-07	--	--	--	--	--	--	--	--	--	--
404504098570101	84-08-07	--	--	--	--	--	--	--	--	--	--
404236098595801	84-08-07	--	--	--	--	--	--	--	--	--	--
404708099101601	84-08-08	--	--	--	--	--	--	--	--	--	--
405506098465201	84-08-08	--	--	--	--	--	--	--	--	--	--
405915098514301	84-08-08	--	--	--	--	--	--	--	--	--	--
410022099081001	84-08-08	--	--	--	--	--	--	--	--	--	--
405751099181801	84-08-08	--	--	--	--	--	--	--	--	--	--
BURT											
414714096302801	84-08-08	--	--	--	--	--	--	--	--	--	--
415710096283101	84-08-09	--	--	--	--	--	--	--	--	--	--
CHASE											
402204101520801	84-08-06	--	--	--	--	--	--	--	--	--	--
402840101295601	84-08-06	--	--	--	--	--	--	--	--	--	--
402812101471801	84-08-06	--	--	--	--	--	--	--	--	--	--
402925102001301	84-08-06	--	--	--	--	--	--	--	--	--	--
403244101213101	84-08-08	--	--	--	--	--	--	--	--	--	--
403230101390301	84-08-06	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	1,2-TRANSDI CHLORO-ETHYL-ENE TOTAL (UG/L) (34546)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34561)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L) (34576)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L) (34668)	VINYL CHLO-RIDE TOTAL (UG/L) (39175)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L) (39180)	PRO-PAZINE TOTAL (UG/L) (39024)	SIME-TRYNE TOTAL (UG/L) (39054)	SIMA-ZINE TOTAL (UG/L) (39055)
ANTELOPE											
415955098061901	84-08-07	--	--	--	--	--	--	--	--	--	--
420100097563401	84-08-07	--	--	--	--	--	--	--	--	--	--
BOX BUTTE											
420504102502101	84-09-06	--	--	--	--	--	--	--	<.10	<.1	<.10
420420102574501	84-09-08	--	--	--	--	--	--	--	<.10	<.1	<.10
420420102574502	84-09-08	--	--	--	--	--	--	--	--	--	--
420618103223001	84-09-07	--	--	--	--	--	--	--	<.10	<.1	<.10
421417102521701	84-09-07	--	--	--	--	--	--	--	<.10	<.1	<.10
421537103042701	84-09-07	--	--	--	--	--	--	--	<.10	<.1	<.10
421422103161901	84-09-07	--	--	--	--	--	--	--	<.10	<.1	<.10
421932103015601	84-09-07	--	--	--	--	--	--	--	<.10	<.1	<.10
421904103080801	84-09-07	--	--	--	--	--	--	--	<.10	<.1	<.10
421936103215901	84-09-07	--	--	--	--	--	--	--	<.10	<.1	<.10
422305102520601	84-09-06	--	--	--	--	--	--	--	<.10	<.1	<.10
BROWN											
423107099423501	83-10-07	--	--	--	--	--	--	--	--	--	--
	84-06-13	--	--	--	--	--	--	--	--	--	--
	84-07-26	--	--	--	--	--	--	--	--	--	--
423252099510901	83-10-05	--	--	--	--	--	--	--	--	--	--
	84-06-14	--	--	--	--	--	--	--	--	--	--
	84-07-25	--	--	--	--	--	--	--	--	--	--
423259099515701	83-10-06	--	--	--	--	--	--	--	--	--	--
	84-07-25	--	--	--	--	--	--	--	--	--	--
423415100032401	83-10-05	--	--	--	--	--	--	--	--	--	--
	84-06-14	--	--	--	--	--	--	--	--	--	--
423944099490901	84-07-25	--	--	--	--	--	--	--	--	--	--
BUFFALO											
404456098502201	84-08-07	--	--	--	--	--	--	--	--	--	--
404504098570101	84-08-07	--	--	--	--	--	--	--	<.10	<.1	<.10
404236098595801	84-08-07	--	--	--	--	--	--	--	--	--	--
404708099101601	84-08-08	--	--	--	--	--	--	--	<.10	<.1	<.10
405506098465201	84-08-08	--	--	--	--	--	--	--	<.10	<.1	<.10
405915098514301	84-08-08	--	--	--	--	--	--	--	<.10	<.1	<.10
410022099081001	84-08-08	--	--	--	--	--	--	--	<.10	<.1	<.10
405751099181801	84-08-08	--	--	--	--	--	--	--	<.10	<.1	<.10
BURT											
414714096302801	84-08-08	--	--	--	--	--	--	--	--	--	--
415710096283101	84-08-09	--	--	--	--	--	--	--	--	--	--
CHASE											
402204101520801	84-08-06	--	--	--	--	--	--	--	--	--	--
402840101295601	84-08-06	--	--	--	--	--	--	--	<.10	<.1	<.10
402812101471801	84-08-06	--	--	--	--	--	--	--	<.10	<.1	<.10
402925102001301	84-08-06	--	--	--	--	--	--	--	<.10	<.1	<.10
403244101213101	84-08-08	--	--	--	--	--	--	--	--	--	--
403230101390301	84-08-06	--	--	--	--	--	--	--	<.10	<.1	<.10

STATION NUMBER	DATE OF SAMPLE	PROME-TONE TOTAL (UG/L) (39056)	PROME-TRYNE TOTAL (UG/L) (39057)	ATRA-ZINE, TOTAL (UG/L) (39630)	CYAN-AZINE TOTAL (UG/L) (81757)	AME-TRYNE TOTAL (82184)
		ANTELOPE				
415955098061901	84-08-07	--	--	--	--	--
420100097563401	84-08-07	--	--	--	--	--
		BOX BUTTE				
420504102502101	84-09-06	<.1	<.1	<.10	<.10	<.10
420420102574501	84-09-08	<.1	<.1	.70	<.10	<.10
420420102574502	84-09-08	--	--	--	--	--
420618103223001	84-09-07	<.1	<.1	<.10	<.10	<.10
421417102521701	84-09-07	[illegible]	<.1	<.10	<.10	<.10
421537103042701	84-09-07	<.1	<.1	<.10	<.10	<.10
421422103161901	84-09-07	<.1	<.1	<.10	<.10	<.10
421932103015601	84-09-07	<.1	<.1	<.10	<.10	<.10
421904103080801	84-09-07	<.1	<.1	<.10	<.10	<.10
421936103215901	84-09-07	<.1	<.1	<.10	<.10	<.10
422305102520601	84-09-06	<.1	<.1	<.10	<.10	<.10
		BROWN				
423107099423501	83-10-07	--	--	--	--	--
	84-06-13	--	--	--	--	--
	84-07-26	--	--	--	--	--
423252099510901	83-10-05	--	--	--	--	--
	84-06-14	--	--	--	--	--
	84-07-25	--	--	--	--	--
423259099515701	83-10-06	--	--	--	--	--
	84-07-25	--	--	--	--	--
423415100032401	83-10-05	--	--	--	--	--
	84-06-14	--	--	--	--	--
423944099490901	84-07-25	--	--	--	--	--
		BUFFALO				
404456098502201	84-08-07	--	--	--	--	--
404504098570101	84-08-07	<.1	<.1	1.4	<.10	<.10
404236098595801	84-08-07	--	--	--	--	--
404708099101601	84-08-08	<.1	<.1	<.10	<.10	<.10
405506098465201	84-08-08	<.1	<.1	<.10	<.10	<.10
405915098514301	84-08-08	<.1	<.1	<.10	<.10	<.10
410022099081001	84-08-08	<.1	<.1	.10	<.10	<.10
405751099181801	84-08-08	<.1	<.1	<.10	<.10	<.10
		BURT				
414714096302801	84-08-08	--	--	--	--	--
415710096283101	84-08-09	--	--	--	--	--
		CHASE				
402204101520801	84-08-06	--	--	--	--	--
402840101295601	84-08-06	<.1	<.1	<.10	<.10	<.10
402612101471801	84-08-06	<.1	<.1	<.10	<.10	<.10
402925102001301	84-08-06	<.1	<.1	<.10	<.10	<.10
403244101213101	84-08-08	--	--	--	--	--
403230101390301	84-08-06	<.1	<.1	<.10	<.10	<.10

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	GEO-LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE-CIFIC CON-DUC-TANCE (UMHOS) (00095)
					CHASE				
403743101470801	8N 39W30DCAA1	40 37 43	101 47 08	C1	1210GLL	84-08-07	--	224	318
403751101561101	8N 41W23DD 1	40 37 51	101 56 11	01	1210GLL	84-08-C7	--	20C	292
					CUMING				
414646096483001	21N 5E23AD 1	41 46 46	096 48 30	C1	112SDGV	84-C8-08	1015	90.00	668
415442096501301	22N 5E 3BDDB1	41 54 42	096 50 13	C1	112SDGV	84-C8-06	1620	8C.00	1020
414956096445101	22N 6E33CCB 1	41 49 56	096 44 51	C1	112SDGV	84-08-08	0930	8C.00	679
415900096591601	23N 6E 8AC 1	41 59 00	096 59 16	C1	112SDGV	84-08-C7	1510	87.00	356
					DODGE				
412629096224201	17N 9E14CA 1	41 26 29	096 22 42	C1	110SDGV	84-08-09	1225	24.00	1210
412958096273501	18N 9E30CB 1	41 29 58	096 27 35	01	110SDGV	84-08-C9	1055	37.00	354
413857096405301	19N 6E 1AC 1	41 38 57	096 40 53	C1	112SCGV	84-C8-C8	1230	86.00	538
413909096334001	19N 7E 1AA 1	41 39 09	096 33 40	C1	112SCGV	84-C8-C8	1630	10C	573
414424096373801	20N 7E 6BB 1	41 44 24	096 37 38	C1	112SDGV	84-08-08	1355	9C.00	997
414147096325501	20N 8E20ABBD1	41 41 47	096 32 55	C1	112SDGV	84-08-C8	1545	127	909
					DOUGLAS				
412236096185801	16N 10E 6AB 1	41 22 36	096 18 58	01	112SDGV	84-08-09	1315	15.00	712
					GARFIELD				
414827098592901	21N 14W 7BCC 1	41 48 27	098 59 29	01	1210GLL	84-08-16	1800	30C	240
415131099052801	22N 15W19DD 1	41 51 31	099 05 28	C1	112SDHL	84-08-16	1910	282	260
420207098470801	24N 13W23DC 1	42 02 07	098 47 08	C1	1210GLL	84-08-16	1400	38C	195
420348099105401	24N 16W 9CD 1	42 03 48	099 10 54	01	112SDGV	84-C8-16	1115	28C	--
					GOSPER				
402516099493301	5N 22W 9BB 1	40 25 16	099 49 33	01	1210GLL	84-09-C7	1130	242	515
403747099391701	8N 21W25CDA	40 37 47	099 39 17	C1	112SCGV	84-09-C7	1400	21C	760
					HALL				
404432098213001	9N 9W16CCCC1	40 44 32	098 21 30	01	112SDGV	84-08-03	1400	184	970
405159098175301	10N 9W 1BCDB1	40 51 59	098 17 53	01	112SDGV	84-03-29	0910	137	875
405156098173601	10N 9W 1BDDC1	40 51 56	098 17 36	C1	112SCGV	84-03-29	0940	133	824
405142098174001	10N 9W 1CACD1	40 51 42	098 17 40	C1	112SDGV	84-03-28	1535	135	910
405136098174901	10N 9W 1CCAD1	40 51 36	098 17 49	C1	112SCGV	84-03-28	1505	131	903
405129098180201	10N 9W 1CCCC1	40 51 29	098 18 02	C1	112SDGV	84-C3-28	1430	125	782
405129098184001	10N 9W 2CDDD1	40 51 29	098 18 40	01	112SDGV	84-C3-28	1005	134	889
405152098180601	10N 9W 2DAAA1	40 51 52	098 18 06	C1	112SDGV	84-03-29	1015	137	934
405142098182301	10N 9W 2BDD1	40 51 42	098 18 23	C1	112SCGV	84-C3-28	1340	129	906
405129098181901	10N 9W 2DDCC1	40 51 29	098 18 19	01	112SDGV	84-03-28	13C5	131	507
405120098181901	10N 9W11AACB1	40 51 2C	098 18 19	C1	112SCGV	84-03-28	1230	129	911
405110098182701	10N 9W11ACAC1	40 51 10	098 18 27	C1	112SDGV	84-C3-28	1150	129	857
405103098184001	10N 9W11BDDD1	40 51 03	098 18 40	C1	112SDGV	84-C3-28	11C5	133	690
405116098320401	10N 11W10ADBA1	40 51 16	098 32 04	C1	112SDGV	84-08-03	0730	4C.00	840
404911098360001	10N 11W19CA 1	40 49 11	098 36 00	C1	112SDGV	84-C8-03	1130	9C.00	1020
405424098192101	11N 9W22DA 1	40 54 24	098 19 21	01	112SDGV	84-03-29	11C0	111	703
405455098191001	11N 9W23BBBB1	40 54 55	098 19 10	01	112SCGV	84-03-29	1215	10C	757
405403098201901	11N 9W27BBBB1	40 54 03	098 20 19	C1	112SDGV	84-C3-29	1300	113	629
405400098211501	11N 9W28BBAD1	40 54 0C	098 21 15	C1	112SDGV	84-C3-29	1505	79.00	607
405400098214501	11N 9W29AABC1	40 54 00	098 21 45	C1	112SCGV	84-03-29	133C	8C.00	390
405342098215101	11N 9W29ACD 1	40 53 42	098 21 51	01	112SCGV	84-03-29	14C5	84.00	585

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)
CHASE											
403743101470801	84-08-07	7.5	15.0	140	0	40	8.6	12	.5	7.7	139
403751101561101	84-08-07	7.0	13.5	120	0	37	7.8	13	.5	7.1	131
CUMING											
414646096483001	84-08-08	7.2	14.5	300	0	89	19	27	.7	4.1	352
415442096501301	84-08-06	7.3	14.5	490	44	140	34	22	.6	11	446
414956096465101	84-08-08	7.5	15.0	320	0	90	22	29	.7	5.2	327
415900096591601	84-08-07	8.0	14.5	160	0	47	10	7.1	.3	6.5	169
DODGE											
412629096224201	84-08-09	7.5	14.5	580	272	170	38	35	.7	6.1	310
412958096273501	84-08-09	7.0	13.5	160	8	44	11	15	.5	5.8	147
413857096405301	84-08-08	7.1	14.0	230	0	68	15	23	.7	4.0	288
413909096334001	84-08-08	7.3	14.0	240	0	73	15	18	.5	11	251
414424096373801	84-08-08	7.4	12.0	460	102	130	34	25	.5	8.1	363
414147096325501	84-08-08	7.2	13.5	400	0	120	25	44	1	10	405
DOUGLAS											
412236096185801	84-08-09	7.3	15.0	350	116	110	19	20	.5	4.4	237
GARFIELD											
414827098592901	84-08-16	6.8	12.0	100	0	33	4.8	5.8	.3	6.3	110
415131099052801	84-08-16	--	13.0	110	0	36	5.6	5.8	.2	5.2	115
420207098470801	84-08-16	6.9	12.0	73	0	25	2.6	5.9	.3	3.9	88
420348099105401	84-08-16	--	12.0	38	0	12	2.0	5.4	.4	2.8	49
GOSPER											
402516099493301	84-09-07	7.4	14.0	240	0	64	20	11	.3	15	258
403747099391701	84-09-07	7.1	14.0	340	111	110	17	21	.5	11	234
HALL											
404432098213001	84-08-03	7.3	13.0	410	166	130	20	47	1	11	242
405159098175301	84-03-29	7.2	13.0	--	--	--	--	--	--	--	--
405156098173601	84-03-29	7.0	11.5	--	--	--	--	--	--	--	--
405142098174001	84-03-28	7.2	11.0	--	--	--	--	--	--	--	--
405136098174901	84-03-28	7.3	11.0	--	--	--	--	--	--	--	--
405129098180201	84-03-28	7.2	11.0	--	--	--	--	--	--	--	--
405129098184001	84-03-28	7.2	11.5	--	--	--	--	--	--	--	--
405152098180601	84-03-29	7.2	12.5	--	--	--	--	--	--	--	--
405142098182301	84-03-28	7.4	12.5	--	--	--	--	--	--	--	--
405129098181901	84-03-28	7.0	11.0	--	--	--	--	--	--	--	--
405120098181901	84-03-28	7.4	11.5	--	--	--	--	--	--	--	--
405110098182701	84-03-28	7.4	11.5	--	--	--	--	--	--	--	--
405103098184001	84-03-28	7.3	10.5	250	79	76	14	48	1	4.9	169
405116098320401	84-08-03	7.2	13.0	380	151	120	20	26	.6	11	232
404911098360001	84-08-03	7.3	13.5	440	178	140	22	32	.7	14	263
405424098192101	84-03-29	6.9	12.0	--	--	--	--	--	--	--	--
405455098191001	84-03-29	6.8	12.5	--	--	--	--	--	--	--	--
405403098201901	84-03-29	6.9	13.5	--	--	--	--	--	--	--	--
405400098211501	84-03-29	6.7	13.0	--	--	--	--	--	--	--	--
405400098214501	84-03-29	6.7	13.0	150	5	48	8.0	14	.5	8.0	145
405342098215101	84-03-29	6.6	13.0	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)
CHASE											
403743101470801	84-08-07	12	4.0	.80	54	220	.30	--	2.6	--	--
403751101561101	84-08-07	13	3.9	.70	53	210	.29	--	1.9	--	--
CUMING											
414646096483001	84-08-08	7.9	1.5	.40	26	390	.52	--	<.10	--	--
415442096501301	84-08-06	58	10	.50	31	580	.79	--	11	--	--
414956096445101	84-08-08	43	4.3	.40	26	420	.57	--	<.10	--	--
415900096591601	84-08-07	16	1.5	.40	17	210	.28	--	<.10	--	--
DODGE											
412629096224201	84-08-09	220	46	.50	14	720	.97	--	18	--	--
412958096273501	84-08-09	22	3.2	.30	31	220	.30	--	4.4	--	--
413857096405301	84-08-08	3.2	2.2	.40	29	320	.43	--	<.10	--	--
413909096334001	84-08-08	37	4.8	.60	43	350	.48	--	.67	--	--
414424096373801	84-08-08	47	11	.60	31	500	.69	--	26	--	--
414147096325501	84-08-08	71	5.0	.80	25	550	.74	--	<.10	--	--
DOUGLAS											
412236096185801	84-08-09	140	14	.40	16	470	.63	--	.34	--	--
GARFIELD											
414827098592901	84-08-16	2.7	.70	.20	49	170	.23	--	.92	--	--
415131099052801	84-08-16	2.5	.90	.30	52	180	.24	--	2.2	--	--
420207098470801	84-08-16	1.7	1.0	.20	51	140	.20	--	.77	--	--
420348099105401	84-08-16	.8	.50	.30	53	110	.14	--	.38	--	--
GOSPER											
402516099493301	84-09-07	18	2.9	.40	63	350	.47	--	2.6	--	--
403747099391701	84-09-07	99	29	.30	49	480	.65	--	7.7	--	--
HALL											
404432098213001	84-08-03	230	30	.40	19	630	.86	--	1.4	--	--
405159098175301	84-03-29	--	--	--	--	--	--	--	--	--	--
405156098173601	84-03-29	--	--	--	--	--	--	--	--	--	--
405142098174001	84-03-28	--	--	--	--	--	--	--	--	--	--
405136098174901	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098180201	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098184001	84-03-28	--	--	--	--	--	--	--	--	--	--
405152098180601	84-03-29	--	--	--	--	--	--	--	--	--	--
405142098182301	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098181901	84-03-28	--	--	--	--	--	--	--	--	--	--
405120098181901	84-03-28	--	--	--	--	--	--	--	--	--	--
405110098182701	84-03-28	--	--	--	--	--	--	--	--	--	--
405103098184001	84-03-28	190	20	--	--	--	--	<.010	.23	<.010	--
405116098320401	84-08-03	77	35	.20	34	460	.63	--	25	--	--
404911098360001	84-08-03	110	15	.30	37	530	.72	--	33	--	--
405424098192101	84-03-29	--	--	--	--	--	--	--	--	--	--
405455098191001	84-03-29	--	--	--	--	--	--	--	--	--	--
405403098201901	84-03-29	--	--	--	--	--	--	--	--	--	--
405400098211501	84-03-29	--	--	--	--	--	--	--	--	--	--
405400098214501	84-03-29	34	8.9	--	--	--	--	<.010	3.7	<.010	4.2
405342098215101	84-03-29	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (C1046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90) (80050)	URANIUM DIS-SOLVED, EXTRACTION (UG/L) (80020)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
					CHASE						
403743101470801	84-08-07	.20	--	--	--	--	--	--	--	--	--
403751101561101	84-08-07	.80	--	--	--	--	--	--	--	--	--
					CUMING						
414646096483001	84-08-08	--	70	81	1200	--	--	--	--	--	--
415442096501301	84-08-06	--	70	5	10	--	--	--	--	--	--
414956096445101	84-08-08	--	80	160	69	--	--	--	--	--	--
415900096591601	84-08-07	--	20	610	200	--	--	--	--	--	--
					DODGE						
412629096224201	84-08-09	--	50	8	610	--	--	--	--	--	--
412958096273501	84-08-09	--	50	<3	10	--	--	--	--	--	--
413857096405301	84-08-08	--	70	1100	1100	--	--	--	--	--	--
413909096334001	84-08-08	--	80	200	450	--	--	--	--	--	--
414424096373801	84-08-08	--	60	3	74	--	--	--	--	--	--
414147096325501	84-08-08	--	160	2700	920	--	--	--	--	--	--
					DOUGLAS						
412236096185801	84-08-09	--	40	1900	660	--	--	--	--	--	--
					GARFIELD						
414827098592901	84-08-16	.40	--	--	--	--	--	--	--	--	--
415131099052801	84-08-16	<.20	--	--	--	--	--	--	--	--	--
420207098470801	84-08-16	.20	--	--	--	--	--	--	--	--	--
420348099105401	84-08-16	<.20	--	--	--	--	--	--	--	--	--
					GOSPER						
402516099493301	84-09-07	<.20	--	--	--	--	--	--	--	--	--
403747099391701	84-09-07	1.5	--	--	--	--	--	--	--	--	--
					HALL						
404432098213001	84-08-03	.20	--	--	--	--	--	--	--	--	--
405159098175301	84-03-29	--	--	--	--	51	17	15	20	.29	20
405156098173601	84-03-29	--	--	--	--	47	13	11	24	.30	24
405142098174001	84-03-28	--	--	--	--	49	16	14	26	.32	26
405136098174901	84-03-28	--	--	--	--	49	16	14	23	.38	23
405129098180201	84-03-28	--	--	--	--	56	11	9.5	20	.16	20
405129098184001	84-03-28	--	--	--	--	50	14	13	23	.34	23
405152098180601	84-03-29	--	--	--	--	51	15	13	20	.35	20
405142098182301	84-03-28	--	--	--	--	50	18	15	21	.35	21
405129098181901	84-03-28	--	--	--	--	33	9.7	8.4	13	.15	13
405120098181901	84-03-28	--	--	--	--	69	15	13	32	.33	32
405110098182701	84-03-28	--	--	--	--	51	14	12	24	.35	24
405103098184001	84-03-28	<.20	--	--	--	53	13	11	25	.29	25
405116098320401	84-08-03	.50	--	--	--	--	--	--	--	--	--
404911098360001	84-08-03	.60	--	--	--	--	--	--	--	--	--
405424098192101	84-03-29	--	--	--	--	48	21	18	19	.38	19
405455098191001	84-03-29	--	--	--	--	52	18	16	18	.40	18
405403098201901	84-03-29	--	--	--	--	54	14	12	23	.36	23
405400098211501	84-03-29	--	--	--	--	58	28	24	23	.42	23
405400098214501	84-03-29	.50	--	--	--	11	10	8.9	6.6	.37	6.6
405342098215101	84-03-29	--	--	--	--	13	13	11	7.1	.23	7.1

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	DI-CHLORO-BROMO-METHANE TOTAL (UG/L) (32101)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L) (32102)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L) (32103)	BROM-OFORM TOTAL (UG/L) (32104)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L) (32105)	CHLORO-FORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLORO-BENZENE TOTAL (UG/L) (34301)	CHLORO-ETHANE TOTAL (UG/L) (34311)
CHASE											
403743101470801	84-08-07	--	--	--	--	--	--	--	--	--	--
403751101561101	84-08-07	--	--	--	--	--	--	--	--	--	--
CUMING											
414646096483001	84-08-08	--	--	--	--	--	--	--	--	--	--
415442096501301	84-08-06	--	--	--	--	--	--	--	--	--	--
414956096445101	84-08-08	--	--	--	--	--	--	--	--	--	--
415900096591601	84-08-07	--	--	--	--	--	--	--	--	--	--
DODGE											
412629096224201	84-08-09	--	--	--	--	--	--	--	--	--	--
412958096273501	84-08-09	--	--	--	--	--	--	--	--	--	--
413857096405301	84-08-08	--	--	--	--	--	--	--	--	--	--
413909096334001	84-08-08	--	--	--	--	--	--	--	--	--	--
414424096373801	84-08-08	--	--	--	--	--	--	--	--	--	--
414147096325501	84-08-08	--	--	--	--	--	--	--	--	--	--
DOUGLAS											
412236096185801	84-08-09	--	--	--	--	--	--	--	--	--	--
GARFIELD											
414827098592901	84-08-16	--	--	--	--	--	--	--	--	--	--
415131099052801	84-08-16	--	--	--	--	--	--	--	--	--	--
420207098470801	84-08-16	--	--	--	--	--	--	--	--	--	--
420348099105401	84-08-16	--	--	--	--	--	--	--	--	--	--
GOSPER											
402516099493301	84-09-07	--	--	--	--	--	--	--	--	--	--
403747099391701	84-09-07	--	--	--	--	--	--	--	--	--	--
HALL											
404432098213001	84-08-03	--	--	--	--	--	--	--	--	--	--
405159098175301	84-03-29	--	--	--	--	--	--	--	--	--	--
405156098173601	84-03-29	--	--	--	--	--	--	--	--	--	--
405142098174001	84-03-28	--	--	--	--	--	--	--	--	--	--
405136098174901	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098180201	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098184001	84-03-28	--	--	--	--	--	--	--	--	--	--
405152098180601	84-03-29	--	--	--	--	--	--	--	--	--	--
405142098182301	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098181901	84-03-28	--	--	--	--	--	--	--	--	--	--
405120098181901	84-03-28	--	--	--	--	--	--	--	--	--	--
405110098182701	84-03-28	--	--	--	--	--	--	--	--	--	--
405103098184001	84-03-28	--	--	--	--	--	--	--	--	--	--
405116098320401	84-08-03	--	--	--	--	--	--	--	--	--	--
404911098360001	84-08-03	--	--	--	--	--	--	--	--	--	--
405424098192101	84-03-29	--	--	--	--	--	--	--	--	--	--
405455098191001	84-03-29	--	--	--	--	--	--	--	--	--	--
405403098201901	84-03-29	--	--	--	--	--	--	--	--	--	--
405400098211501	84-03-29	--	--	--	--	--	--	--	--	--	--
405400098214501	84-03-29	--	--	--	--	--	--	--	--	--	--
405342098215101	84-03-29	--	--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	ETHYL-BENZENE TOTAL (UG/L) (34371)	METHYL-BROMIDE TOTAL (UG/L) (34413)	METHYL-ENE CHLO-RIDE TOTAL (UG/L) (34423)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L) (34475)	TRI-CHLORO-FLOURO-METHANE TOTAL (UG/L) (34488)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L) (34501)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L) (34506)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L) (34511)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L) (34516)
CHASE											
403743101470801	84-08-07	--	--	--	--	--	--	--	--	--	--
403751101561101	84-08-07	--	--	--	--	--	--	--	--	--	--
CUMING											
414646096683001	84-08-08	--	--	--	--	--	--	--	--	--	--
415442096501301	84-08-06	--	--	--	--	--	--	--	--	--	--
414956096445101	84-08-08	--	--	--	--	--	--	--	--	--	--
415900096591601	84-08-07	--	--	--	--	--	--	--	--	--	--
DODGE											
412629096224201	84-08-09	--	--	--	--	--	--	--	--	--	--
412958096273501	84-08-09	--	--	--	--	--	--	--	--	--	--
413857096405301	84-08-08	--	--	--	--	--	--	--	--	--	--
413909096334001	84-08-08	--	--	--	--	--	--	--	--	--	--
414424096373801	84-08-08	--	--	--	--	--	--	--	--	--	--
414147096325501	84-08-08	--	--	--	--	--	--	--	--	--	--
DOUGLAS											
412236096195801	84-08-09	--	--	--	--	--	--	--	--	--	--
GARFIELD											
414827098592901	84-08-16	--	--	--	--	--	--	--	--	--	--
415131099052601	84-08-16	--	--	--	--	--	--	--	--	--	--
420207098470801	84-08-16	--	--	--	--	--	--	--	--	--	--
420348099105401	84-08-16	--	--	--	--	--	--	--	--	--	--
GOSPER											
402516099493301	84-09-07	--	--	--	--	--	--	--	--	--	--
403747099391701	84-09-07	--	--	--	--	--	--	--	--	--	--
HALL											
404432098213001	84-08-03	--	--	--	--	--	--	--	--	--	--
405159098175301	84-03-29	--	--	--	--	--	--	--	--	--	--
405156098173601	84-03-29	--	--	--	--	--	--	--	--	--	--
405142098174001	84-03-28	--	--	--	--	--	--	--	--	--	--
405136098174901	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098180201	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098184001	84-03-28	--	--	--	--	--	--	--	--	--	--
405152098180601	84-03-29	--	--	--	--	--	--	--	--	--	--
405142098182301	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098181901	84-03-28	--	--	--	--	--	--	--	--	--	--
405120098181901	84-03-28	--	--	--	--	--	--	--	--	--	--
405110098182701	84-03-28	--	--	--	--	--	--	--	--	--	--
405103098184001	84-03-28	--	--	--	--	--	--	--	--	--	--
405116098320401	84-08-03	--	--	--	--	--	--	--	--	--	--
404911098360001	84-08-03	--	--	--	--	--	--	--	--	--	--
405424098192101	84-03-29	--	--	--	--	--	--	--	--	--	--
405455098191001	84-03-29	--	--	--	--	--	--	--	--	--	--
405403098201901	84-03-29	--	--	--	--	--	--	--	--	--	--
405400098211501	84-03-29	--	--	--	--	--	--	--	--	--	--
405400098214501	84-03-29	--	--	--	--	--	--	--	--	--	--
405342098215101	84-03-29	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	1,2-TRANSDI CHLORO-ETHYL-ENE TOTAL (UG/L) (34546)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34561)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L) (34576)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L) (34668)	VINYL CHLO-RIDE TOTAL (UG/L) (39175)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L) (39180)	PRO-PAZINE TOTAL (UG/L) (39024)	SIME-TRYNE TOTAL (UG/L) (39C54)	SIMA-ZINE TOTAL (UG/L) (39055)
					CHASE						
403743101470801	84-08-07	--	--	--	--	--	--	--	--	--	--
403751101561101	84-08-07	--	--	--	--	--	--	--	<.10	<.1	<.10
					CUMING						
414646096483001	84-08-08	--	--	--	--	--	--	--	--	--	--
415442096501301	84-08-06	--	--	--	--	--	--	--	--	--	--
414956096445101	84-08-08	--	--	--	--	--	--	--	--	--	--
415900096591601	84-08-07	--	--	--	--	--	--	--	--	--	--
					DODGE						
412629096224201	84-08-09	--	--	--	--	--	--	--	--	--	--
412958096273501	84-08-09	--	--	--	--	--	--	--	--	--	--
413857096405301	84-08-08	--	--	--	--	--	--	--	--	--	--
413909096334001	84-08-08	--	--	--	--	--	--	--	--	--	--
414424096373801	84-08-08	--	--	--	--	--	--	--	--	--	--
414147096325501	84-08-08	--	--	--	--	--	--	--	--	--	--
					DOUGLAS						
412236096185801	84-08-09	--	--	--	--	--	--	--	--	--	--
					GARFIELD						
414827098592901	84-08-16	--	--	--	--	--	--	--	<.10	<.1	<.10
415131099052801	84-08-16	--	--	--	--	--	--	--	<.10	<.1	<.10
420207098470801	84-08-16	--	--	--	--	--	--	--	<.10	<.1	<.10
420348099105401	84-08-16	--	--	--	--	--	--	--	--	--	--
					GOSPER						
402516099493301	84-09-07	--	--	--	--	--	--	--	<.10	<.1	<.10
403747099391701	84-09-07	--	--	--	--	--	--	--	<.10	<.1	<.10
					HALL						
404432098213001	84-08-03	--	--	--	--	--	--	--	<.10	<.1	<.10
405159098175301	84-03-29	--	--	--	--	--	--	--	--	--	--
405156098173601	84-03-29	--	--	--	--	--	--	--	--	--	--
405142098174001	84-03-28	--	--	--	--	--	--	--	--	--	--
405136098174901	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098180201	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098184001	84-03-28	--	--	--	--	--	--	--	--	--	--
405152098180601	84-03-29	--	--	--	--	--	--	--	--	--	--
405142098182301	84-03-28	--	--	--	--	--	--	--	--	--	--
405129098181901	84-03-28	--	--	--	--	--	--	--	--	--	--
405120098181901	84-03-28	--	--	--	--	--	--	--	--	--	--
405110098182701	84-03-28	--	--	--	--	--	--	--	--	--	--
405103098184001	84-03-28	--	--	--	--	--	--	--	<.10	<.1	<.10
405116098320401	84-08-03	--	--	--	--	--	--	--	<.10	<.1	<.10
404911098360001	84-08-03	--	--	--	--	--	--	--	--	--	--
405424098192101	84-03-29	--	--	--	--	--	--	--	--	--	--
405455098191001	84-03-29	--	--	--	--	--	--	--	--	--	--
405403098201901	84-03-29	--	--	--	--	--	--	--	--	--	--
405400098211501	84-03-29	--	--	--	--	--	--	--	--	--	--
405400098214501	84-03-29	--	--	--	--	--	--	--	<.10	<.1	<.10
405342098215101	84-03-29	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	PROME-TONE TOTAL (UG/L) (39056)	PROME-TRYNE TOTAL (UG/L) (39057)	ATRA-ZINE, TOTAL (UG/L) (39630)	CYAN-AZINE TOTAL (UG/L) (81757)	AME-TRYNE TOTAL (82184)
		CHASE				
403743101470801	84-08-07	--	--	--	--	--
403751101561101	84-08-07	<.1	<.1	<.10	<.10	<.10
		CUMING				
414646096483001	84-08-08	--	--	--	--	--
415442096501301	84-08-06	--	--	--	--	--
414956096445101	84-08-08	--	--	--	--	--
415900096591601	84-08-07	--	--	--	--	--
		DODGE				
412629096224201	84-08-09	--	--	--	--	--
412958096273501	84-08-09	--	--	--	--	--
413857096405301	84-08-08	--	--	--	--	--
413909096334001	84-08-08	--	--	--	--	--
414424096373801	84-08-08	--	--	--	--	--
414147096325501	84-08-08	--	--	--	--	--
		DOUGLAS				
412236096185801	84-08-09	--	--	--	--	--
		GARFIELD				
414827098592901	84-08-16	<.1	<.1	<.10	<.10	<.10
415131099052801	84-08-16	<.1	<.1	<.10	<.10	<.10
420207098470801	84-08-16	<.1	<.1	<.10	<.10	<.10
420348099105401	84-08-16	--	--	--	--	--
		GOSPER				
402516099493301	84-09-07	<.1	<.1	<.10	<.10	<.10
403747099391701	84-09-07	<.1	<.1	<.10	<.10	<.10
		HALL				
404432098213001	84-08-03	<.1	<.1	<.10	<.10	<.10
405159098175301	84-03-29	--	--	--	--	--
405156098173601	84-03-29	--	--	--	--	--
405142098174001	84-03-28	--	--	--	--	--
405136098174901	84-03-28	--	--	--	--	--
405129098180201	84-03-28	--	--	--	--	--
405129098184001	84-03-28	--	--	--	--	--
405152098180601	84-03-29	--	--	--	--	--
405142098182301	84-03-28	--	--	--	--	--
405129098181901	84-03-28	--	--	--	--	--
405120098181901	84-03-28	--	--	--	--	--
405110098182701	84-03-28	--	--	--	--	--
405103098184001	84-03-28	<.1	<.1	<.10	<.10	<.10
405116098320401	84-08-03	<.1	<.1	.60	<.10	<.10
404911098360001	84-08-03	--	--	--	--	--
405424098192101	84-03-29	--	--	--	--	--
405455098191001	84-03-29	--	--	--	--	--
405403098201901	84-03-29	--	--	--	--	--
405400098211501	84-03-29	--	--	--	--	--
405400098214501	84-03-29	<.1	<.1	.10	<.10	<.10
405342098215101	84-03-29	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	LOCAL IDENT- I- FIER	LAT- I- TUDE	LONG- I- TUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUC- TANCE (UMHOS) (00095)
					HALL				
405340098213201	11N 9W29ADDD1	40 53 40	098 21 32	01	112SDGV	84-03-29	1435	80.00	703
405311098220601	11N 9W32BAAA1	40 53 11	098 22 06	01	112SDGV	84-03-29	1540	83.00	488
405716098271701	11N 10W 4BCCB1	40 57 16	098 27 17	01	112SDGV	84-08-04	0900	60.00	865
405608098271401	11N 10W 9CBCC1	40 56 08	098 27 14	01	112SDGV	84-08-30	--	50.00	478
405604098264601	11N 10W 9CDA 1	40 56 04	098 26 46	01	112SDGV	84-08-30	--	50.00	1290
405639098250101	11N 10W10AADA1	40 56 39	098 25 01	01	112SDGV	84-08-30	--	30.00	435
405625098252401	11N 10W10ACDB1	40 56 25	098 25 24	01	112SDGV	84-08-30	--	78.00	490
405612098260601	11N 10W10CBCB1	40 56 12	098 26 06	01	112SDGV	84-08-30	--	68.00	567
405608098245701	11N 10W11CBC 1	40 56 08	098 24 57	01	112SDGV	84-08-04	1200	90.00	900
405531098255701	11N 10W15BC 1	40 55 31	098 25 57	01	112SDGV	84-08-03	0900	52.00	305
405530098255702	11N 10W15BC 2	40 55 30	098 25 57	02	112SDGV	84-08-03	0915	100	400
405547098270601	11N 10W16BBCA1	40 55 47	098 27 06	01	112SDGV	84-08-30	--	100	618
405408098262801	11N 10W21DCD 1	40 54 08	098 26 28	01	112SDGV	84-08-03	0945	80.00	407
405436098245801	11N 10W23BCCC1	40 54 36	098 24 58	01	112SDGV	84-08-03	0800	85.00	1040
405400098244601	11N 10W26BBD 1	40 54 00	098 24 46	01	112SDGV	84-08-04	1300	--	312
410108098244801	12N 10W 8DDD 1	41 01 08	098 24 48	01	112SDGV	84-08-03	1300	--	320
410006098234801	12N 10W24BBC 1	41 00 06	098 23 48	01	112SDGV	84-08-04	1030	65.00	590
410005098365102	12N 12W24AB 2	41 00 05	098 36 51	02	112SDGV	84-08-03	1230	125	500
					HAYES				
402329101020501	5N 33W23BAA 1	40 23 38	101 02 05	01	1210GLL	84-08-08	--	382	402
402758100505801	6N 31W28BA 1	40 27 58	100 50 58	01	1210GLL	84-08-08	--	302	432
402728101105501	6N 34W28DBB 1	40 27 28	101 10 55	01	1210GLL	84-08-08	1230	287	390
402701101175201	6N 35W33BAD 1	40 27 01	101 17 52	01	1210GLL	84-08-08	--	180	400
403329101055501	7N 33W20CBB 1	40 33 29	101 05 55	01	1210GLL	84-08-08	--	180	340
403802101041101	8N 33W28ACD 1	40 38 02	101 04 11	01	1210GLL	84-08-08	--	550	380
403744101173601	8N 35W28DD 1	40 37 44	101 17 36	01	1210GLL	84-08-08	--	289	--
					HOLT				
421157098482501	26N 13W26BC 1	42 11 57	098 48 25	01	112SDGV	84-08-16	0900	225	--
422039098360201	27N 11W 4AC 1	42 20 39	098 36 02	01	112SDGV	84-08-13	1900	78.00	--
422524098222101	28N 9W 4CCCC1	42 25 24	098 22 21	01	112SDGV	84-08-30	1145	119	378
422216099030101	28N 15W27AC 1	42 22 16	099 03 01	01	112SDGV	84-08-15	1600	27.00	--
422925098244201	29N 9W18AC 1	42 29 25	098 24 42	01	112SDGV	84-08-30	1030	104	296
422858098255201	29N 10W13DCB 1	42 28 58	098 25 52	01	1210GLL	84-08-14	1010	104	280
422723098290101	29N 10W28DA 1	42 27 23	098 29 01	01	112SDGV	84-08-30	1100	45.00	695
422944098360801	29N 11W 9DC 1	42 29 44	098 36 08	01	112SDGV	84-08-30	0820	36.00	184
422931098371801	29N 11W17AB 1	42 29 31	098 37 18	01	112SDGV	84-08-14	1900	100	--
422917098405101	29N 12W14AC 1	42 29 17	098 40 51	01	1210GLL	84-08-29	1600	297	518
422848098423101	29N 12W15CCD 1	42 28 48	098 42 31	01	112SDGV	84-08-14	1800	150	--
422825098395901	29N 12W24BD 1	42 28 25	098 39 59	01	1210GLL	84-08-30	2000	322	315
423042098503601	29N 13W 4CC 1	42 30 42	098 50 36	01	1210GLL	84-08-15	0840	312	325
						84-08-29	0845	312	320
423510098250501	30N 9W 7CC 1	42 35 10	098 25 05	01	1210GLL	84-08-30	0940	250	195

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)
					HALL						
405340098213201	84-03-29	6.9	13.0	--	--	--	--	--	--	--	--
405311098220601	84-03-29	6.8	13.0	300	79	91	18	23	.6	11	223
405716098271701	84-08-04	6.7	11.0	--	--	--	--	--	--	--	--
405608098271401	84-08-30	7.3	13.0	--	--	--	--	--	--	--	--
405604098264601	84-08-30	6.1	18.0	--	--	--	--	--	--	--	--
405639098250101	84-08-30	6.4	15.0	--	--	--	--	--	--	--	--
405625098252401	84-08-30	6.5	12.0	--	--	--	--	--	--	--	--
405612098260601	84-08-30	6.4	11.0	--	--	--	--	--	--	--	--
405608098245701	84-08-04	7.3	14.5	--	--	--	--	--	--	--	--
405531098255701	84-08-03	6.8	14.5	120	31	39	6.6	9.1	.4	7.2	94
405530098255702	84-08-03	7.3	14.5	--	--	--	--	--	--	--	--
405547098270601	84-08-30	6.7	12.0	--	--	--	--	--	--	--	--
405408098262801	84-08-03	6.9	12.0	--	--	--	--	--	--	--	--
405436098245801	84-08-03	7.1	13.0	410	48	120	27	54	1	32	363
405400098244601	84-08-04	7.4	14.5	--	--	--	--	--	--	--	--
410108098244801	84-08-03	7.3	12.0	140	0	45	6.8	7.8	.3	8.4	152
410006098234801	84-08-04	6.8	12.5	--	--	--	--	--	--	--	--
410005098365102	84-08-03	7.2	14.5	230	35	71	12	11	.3	8.9	192
					HAYES						
402329101020501	84-08-08	--	15.0	170	0	43	14	12	.4	11	171
402758100505801	84-08-08	7.0	15.0	180	0	46	16	14	.5	12	189
402728101105501	84-08-08	--	15.0	160	0	44	13	9.9	.3	11	168
402701101175201	84-08-08	7.1	13.0	160	9	41	15	12	.4	10	155
403329101055501	84-08-08	7.2	14.0	160	0	43	13	13	.5	11	179
403802101041101	84-08-08	--	16.0	160	0	43	13	16	.6	11	170
403744101173601	84-08-08	7.2	14.0	170	3	45	13	9.9	.3	9.7	163
					HOLT						
421157098482501	84-08-16	--	12.0	58	0	19	2.6	5.3	.3	4.0	70
422039098360201	84-08-13	--	12.0	25	2	7.9	1.2	4.1	.4	2.3	23
422524098222101	84-08-30	7.8	12.5	150	42	50	7.1	13	.5	4.0	112
422216099030101	84-08-15	--	11.0	74	0	24	3.4	12	.6	4.5	96
422925098244201	84-08-30	7.7	13.0	110	84	34	6.4	8.8	.4	3.8	27
422858098255201	84-08-14	6.2	12.0	98	74	30	5.6	7.6	.3	3.4	24
422723098290101	84-08-30	7.0	13.0	250	215	74	15	18	.5	4.4	32
422944098360801	84-08-30	8.8	12.0	80	0	27	3.1	6.0	.3	4.9	87
422931098371801	84-08-14	--	11.5	73	10	24	3.1	6.6	.4	5.0	63
422917098405101	84-08-29	8.2	13.0	210	120	64	11	9.4	.3	6.2	85
422848098423101	84-08-14	--	13.0	68	2	22	3.1	5.8	.3	3.4	66
422825098395901	84-08-30	8.1	14.0	140	34	45	6.2	8.9	.3	4.5	104
423042098503601	84-08-15	7.1	13.0	150	20	50	6.5	6.2	.2	5.2	132
	84-08-29	8.4	14.5	150	22	50	6.6	6.3	.2	5.7	130
423510098250501	84-08-30	7.8	13.0	68	31	21	3.7	8.4	.5	2.8	37

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN DIS-SOLVED (MG/L AS N) (00602)
					HALL						
405340098213201	84-03-29	--	--	--	--	--	--	--	--	--	--
405311098220601	84-03-29	120	10	--	--	--	--	<.010	7.3	.030	7.8
405716098271701	84-08-04	--	--	--	--	--	--	--	--	--	--
405608098271601	84-08-30	--	--	--	--	--	--	--	--	--	--
405604098264601	84-08-30	--	--	--	--	--	--	--	--	--	--
405639098250101	84-08-30	--	--	--	--	--	--	--	--	--	--
405625098252401	84-08-30	--	--	--	--	--	--	--	--	--	--
405612098260601	84-08-30	--	--	--	--	--	--	--	--	--	--
405608098245701	84-08-04	--	--	--	--	--	--	--	--	--	--
405531098255701	84-08-03	25	8.0	.30	29	180	.25	--	3.6	--	--
405530098255702	84-08-03	--	--	--	--	--	--	--	--	--	--
405547098270601	84-08-30	--	--	--	--	--	--	--	--	--	--
405408098262801	84-08-03	--	--	--	--	--	--	--	--	--	--
405436098245801	84-08-03	46	22	.40	34	550	.75	--	33	--	--
405400098244601	84-08-04	--	--	--	--	--	--	--	--	--	--
410108098244801	84-08-03	7.2	2.0	.40	54	220	.30	--	<.10	--	--
410006098234801	84-08-04	--	--	--	--	--	--	--	--	--	--
410005098365102	84-08-03	58	14	.30	45	340	.46	--	<.10	--	--
					HAYES						
402329101020501	84-08-08	15	4.5	1.0	64	270	.36	--	2.9	--	--
402758100505801	84-08-08	16	3.8	1.0	67	290	.39	--	2.9	--	--
402728101105501	84-08-08	12	5.1	.80	62	260	.35	--	2.9	--	--
402701101175201	84-08-08	21	5.1	1.2	66	260	.36	--	4.0	--	--
403329101055501	84-08-08	14	3.4	.80	61	270	.36	--	2.7	--	--
403802101041101	84-08-08	15	3.9	.70	64	270	.37	--	2.0	--	--
403744101173601	84-08-08	14	8.6	.70	59	260	.35	--	2.5	--	--
					HOLT						
421157098482501	84-08-16	1.6	.60	.30	55	130	.18	--	.54	--	--
422039098360201	84-08-13	5.2	.70	<.10	35	70	.10	--	2.3	--	--
422524098222101	84-08-30	10	3.4	.20	46	200	.27	--	15	--	--
422216099030101	84-08-15	2.4	1.2	.10	45	150	.20	--	.44	--	--
422925098244201	84-08-30	13	5.9	.20	29	120	.16	--	23	--	--
422858098255201	84-08-14	14	6.2	.10	26	110	.15	--	20	--	--
422723098290101	84-08-30	33	25	<.10	21	210	.29	--	55	--	--
422944098360801	84-08-30	1.9	.90	.20	62	160	.22	--	.82	--	--
422931098371801	84-08-14	4.0	1.2	.20	58	140	.19	--	6.4	--	--
422917098405101	84-08-29	14	9.8	.40	45	210	.29	--	33	--	--
422848098423101	84-08-14	2.7	2.7	.20	61	140	.19	--	2.7	--	--
422825098395901	84-08-30	9.5	1.9	.30	48	190	.25	--	10	--	--
423042098503601	84-08-15	5.6	2.7	.30	59	210	.29	--	6.5	--	--
	84-08-29	6.7	2.2	.30	57	210	.29	--	6.5	--	--
423510098250501	84-08-30	10	4.6	.10	29	100	.14	--	8.4	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS- SOLVED (UG/L AS MN) (01056)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, DIS- SCLVED (PCI/L AS SR/ YT-90) (80050)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
					HALL						
405340098213201	84-03-29	--	--	--	--	39	16	13	15	.22	15
405311098220601	84-03-29	.50	--	--	--	40	15	13	15	.54	15
405716098271701	84-08-04	--	--	--	--	--	--	--	--	--	--
405608098271401	84-08-30	--	--	--	--	--	--	--	--	--	--
405604098264601	84-08-30	--	--	--	--	--	--	--	--	--	--
405639098250101	84-08-30	--	--	--	--	--	--	--	--	--	--
405625098252401	84-08-30	--	--	--	--	--	--	--	--	--	--
405612098260601	84-08-30	--	--	--	--	--	--	--	--	--	--
405608098245701	84-08-04	--	--	--	--	--	--	--	--	--	--
405531098255701	84-08-03	1.1	--	--	--	--	--	--	--	--	--
405530098255702	84-08-03	--	--	--	--	--	--	--	--	--	--
405547098270601	84-08-30	--	--	--	--	--	--	--	--	--	--
405408098262801	84-08-03	.40	--	--	--	--	--	--	--	--	--
405436098245801	84-08-03	.60	--	--	--	--	--	--	--	--	--
405400098244601	84-08-04	--	--	--	--	--	--	--	--	--	--
410108098244801	84-08-03	.30	--	--	--	--	--	--	--	--	--
410006098234801	84-08-04	--	--	--	--	--	--	--	--	--	--
410005098365102	84-08-03	.50	--	--	--	--	--	--	--	--	--
					HAYES						
402329101020501	84-08-08	.30	--	--	--	--	--	--	--	--	--
402758100505801	84-08-08	.50	--	--	--	--	--	--	--	--	--
402728101105501	84-08-08	.50	--	--	--	--	--	--	--	--	--
402701101175201	84-08-08	.20	--	--	--	--	--	--	--	--	--
403329101055501	84-08-08	<.20	--	--	--	--	--	--	--	--	--
403802101041101	84-08-08	.20	--	--	--	--	--	--	--	--	--
403744101173601	84-08-08	.60	--	--	--	--	--	--	--	--	--
					HOLT						
421157098482501	84-08-16	<.20	--	--	--	--	--	--	--	--	--
422039098360201	84-08-13	.30	--	--	--	--	--	--	--	--	--
422524098222101	84-08-30	--	20	<3	3	--	--	--	--	--	--
422216099030101	84-08-15	20	--	--	--	--	--	--	--	--	--
422925098244201	84-08-30	--	20	3	4	--	--	--	--	--	--
422858098255201	84-08-14	<.20	--	--	--	--	--	--	--	--	--
422723098290101	84-08-30	--	40	45	7	--	--	--	--	--	--
422944098360801	84-08-30	--	30	<3	1	--	--	--	--	--	--
422931098371801	84-08-14	.50	--	--	--	--	--	--	--	--	--
422917098405101	84-08-29	--	30	<3	5	--	--	--	--	--	--
422848098423101	84-08-14	.40	--	--	--	--	--	--	--	--	--
422825098395901	84-08-30	--	30	<3	3	--	--	--	--	--	--
423042098503601	84-08-15	.50	--	--	--	--	--	--	--	--	--
	84-08-29	--	20	<3	3	--	--	--	--	--	--
423510098250501	84-08-30	--	30	5	7	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	DI-CHLORO-BROMO-METHANE TOTAL (UG/L) (32101)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L) (32102)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L) (32103)	BROM-OFORM TOTAL (UG/L) (32104)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L) (32105)	CHLORO-FORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLORO-BENZENE TOTAL (UG/L) (34301)	CHLORO-ETHANE TOTAL (UG/L) (34311)
						HALL					
405340098213201	84-03-29	--	--	--	--	--	--	--	--	--	--
405311098220601	84-03-29	--	--	--	--	--	--	--	--	--	--
405716098271701	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3	<3.0	<3.0	<3.0	<3.0
405608098271401	84-08-30	--	--	--	--	--	--	--	--	--	--
405604098264601	84-08-30	<3.0	<3.0	<3.0	<3.0	<3.0	<3	<3.0	<3.0	<3.0	<3.0
405639098250101	84-08-30	--	--	--	--	--	--	--	--	--	--
405625098252401	84-08-30	<3.0	<3.0	<3.0	<3.0	<3.0	<3	<3.0	<3.0	<3.0	<3.0
405612098260601	84-08-30	<3.0	<3.0	<3.0	<3.0	<3.0	<3	<3.0	<3.0	<3.0	<3.0
405608098245701	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3	<3.0	<3.0	<3.0	<3.0
405531098255701	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3	<3.0	<3.0	<3.0	<3.0
405530098255702	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3	<3.0	<3.0	<3.0	<3.0
405547098270601	84-08-30	--	--	--	--	--	--	--	--	--	--
405408098262801	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3	<3.0	<3.0	<3.0	<3.0
405436098245801	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3	<3.0	<3.0	<3.0	<3.0
405400098244601	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3	<3.0	<3.0	<3.0	<3.0
410108098244801	84-08-03	--	--	--	--	--	--	--	--	--	--
410006098234801	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3	<3.0	<3.0	<3.0	<3.0
410005098365102	84-08-03	--	--	--	--	--	--	--	--	--	--
						HAYES					
402329101020501	84-08-08	--	--	--	--	--	--	--	--	--	--
402758100505801	84-08-08	--	--	--	--	--	--	--	--	--	--
402728101105501	84-08-08	--	--	--	--	--	--	--	--	--	--
402701101175201	84-08-08	--	--	--	--	--	--	--	--	--	--
403329101055501	84-08-08	--	--	--	--	--	--	--	--	--	--
403802101041101	84-08-08	--	--	--	--	--	--	--	--	--	--
403744101173601	84-08-08	--	--	--	--	--	--	--	--	--	--
						HOLT					
421157098482501	84-08-16	--	--	--	--	--	--	--	--	--	--
422039098360201	84-08-13	--	--	--	--	--	--	--	--	--	--
422524098222101	84-08-30	--	--	--	--	--	--	--	--	--	--
422216099030101	84-08-15	--	--	--	--	--	--	--	--	--	--
422925098244201	84-08-30	--	--	--	--	--	--	--	--	--	--
422858098255201	84-08-14	--	--	--	--	--	--	--	--	--	--
422723098290101	84-08-30	--	--	--	--	--	--	--	--	--	--
422944098360801	84-08-30	--	--	--	--	--	--	--	--	--	--
422931098371801	84-08-14	--	--	--	--	--	--	--	--	--	--
422917098405101	84-08-29	--	--	--	--	--	--	--	--	--	--
422848098423101	84-08-14	--	--	--	--	--	--	--	--	--	--
422825098395901	84-08-30	--	--	--	--	--	--	--	--	--	--
423042098503601	84-08-15	--	--	--	--	--	--	--	--	--	--
	84-08-29	--	--	--	--	--	--	--	--	--	--
423510098250501	84-08-30	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	ETHYL-BENZENE TOTAL (UG/L) (34371)	METHYL-BROMIDE TOTAL (UG/L) (34413)	METHYL-ENE CHLO-RIDE TOTAL (UG/L) (34423)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L) (34475)	TRI-CHLORO-FLOURO-METHANE TOTAL (UG/L) (34488)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L) (34501)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L) (34506)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L) (34511)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L) (34516)
HALL											
405340098213201	84-03-29	--	--	--	--	--	--	--	--	--	--
405311098220601	84-03-29	--	--	--	--	--	--	--	--	--	--
405716098271701	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
405608098271401	84-08-30	--	--	--	--	--	--	--	--	--	--
405604098264601	84-08-30	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
405639098250101	84-08-30	--	--	--	--	--	--	--	--	--	--
405625098252401	84-08-30	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	4.1	<3.0
405612098260601	84-08-30	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
405608098245701	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
405531098255701	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
405530098255702	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
405547098270601	84-08-30	--	--	--	--	--	--	--	--	--	--
405408098262801	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
405436098245801	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
405400098244601	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
410108098244801	84-08-03	--	--	--	--	--	--	--	--	--	--
410006098234801	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
410005098365102	84-08-03	--	--	--	--	--	--	--	--	--	--
HAYES											
402329101020501	84-08-08	--	--	--	--	--	--	--	--	--	--
402758100505801	84-08-08	--	--	--	--	--	--	--	--	--	--
402728101105501	84-08-08	--	--	--	--	--	--	--	--	--	--
402701101175201	84-08-08	--	--	--	--	--	--	--	--	--	--
403329101055501	84-08-08	--	--	--	--	--	--	--	--	--	--
403802101041101	84-08-08	--	--	--	--	--	--	--	--	--	--
403744101173601	84-08-08	--	--	--	--	--	--	--	--	--	--
HOLT											
421157098482501	84-08-16	--	--	--	--	--	--	--	--	--	--
422039098360201	84-08-13	--	--	--	--	--	--	--	--	--	--
422524098222101	84-08-30	--	--	--	--	--	--	--	--	--	--
422216099030101	84-08-15	--	--	--	--	--	--	--	--	--	--
422925098244201	84-08-30	--	--	--	--	--	--	--	--	--	--
422858098255201	84-08-14	--	--	--	--	--	--	--	--	--	--
422723098290101	84-08-30	--	--	--	--	--	--	--	--	--	--
422944098360801	84-08-30	--	--	--	--	--	--	--	--	--	--
422931098371801	84-08-14	--	--	--	--	--	--	--	--	--	--
422917098405101	84-08-29	--	--	--	--	--	--	--	--	--	--
422848098423101	84-08-14	--	--	--	--	--	--	--	--	--	--
422825098395901	84-08-30	--	--	--	--	--	--	--	--	--	--
423042098503601	84-08-15	--	--	--	--	--	--	--	--	--	--
	84-08-29	--	--	--	--	--	--	--	--	--	--
423510098250501	84-08-30	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	1,2-TRANSDI CHLORO-ETHYL-ENE TOTAL (UG/L) (34546)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34561)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L) (34576)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L) (34668)	VINYL CHLO-RIDE TOTAL (UG/L) (39175)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L) (39180)	PRO-PAZINE TOTAL (UG/L) (39024)	SIME-TRYNE TOTAL (UG/L) (39054)	SIMA-ZINE TOTAL (UG/L) (39055)
					HALL						
405340098213201	84-03-29	--	--	--	--	--	--	--	--	--	--
405311098220601	84-03-29	--	--	--	--	--	--	--	<.10	<.1	.10
405716098271701	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	--	--	--
405608098271401	84-08-30	--	--	--	--	--	--	--	--	--	--
405604098264601	84-08-30	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	--	--	--
405639098250101	84-08-30	--	--	--	--	--	--	--	--	--	--
405625098252401	84-08-30	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	--	--	--
405612098260601	84-08-30	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	--	--	--
405608098245701	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	--	--	--
405531098255701	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<.10	<.1	<.10
405530098255702	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	--	--	--
405547098270601	84-08-30	--	--	--	--	--	--	--	--	--	--
405408098262801	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	--	--	--
405436098245801	84-08-03	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<.10	<.1	<.10
405400098244601	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	--	--	--
410108098244801	84-08-03	--	--	--	--	--	--	--	--	--	--
410006098234801	84-08-04	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	--	--	--
410005098365102	84-08-03	--	--	--	--	--	--	--	--	--	--
					HAYES						
402329101020501	84-08-08	--	--	--	--	--	--	--	--	--	--
402758100505801	84-08-08	--	--	--	--	--	--	--	<.10	<.1	<.10
402728101105501	84-08-08	--	--	--	--	--	--	--	<.10	<.1	<.10
402701101175201	84-08-08	--	--	--	--	--	--	--	--	--	--
403329101055501	84-08-08	--	--	--	--	--	--	--	--	--	--
403802101041101	84-08-08	--	--	--	--	--	--	--	<.10	<.1	<.10
403744101173601	84-08-08	--	--	--	--	--	--	--	<.10	<.1	<.10
					HOLT						
421157098482501	84-08-16	--	--	--	--	--	--	--	<.10	<.1	<.10
422039098360201	84-08-13	--	--	--	--	--	--	--	--	--	--
422524098222101	84-08-30	--	--	--	--	--	--	--	--	--	--
422216099030101	84-08-15	--	--	--	--	--	--	--	--	--	--
422925098244201	84-08-30	--	--	--	--	--	--	--	--	--	--
422858098255201	84-08-14	--	--	--	--	--	--	--	<.10	<.1	<.10
422723098290101	84-08-30	--	--	--	--	--	--	--	--	--	--
422944098360801	84-08-30	--	--	--	--	--	--	--	--	--	--
422931098371801	84-08-14	--	--	--	--	--	--	--	<.10	<.1	<.10
422917098405101	84-08-29	--	--	--	--	--	--	--	--	--	--
422846098423101	84-08-14	--	--	--	--	--	--	--	<.10	<.1	<.10
422825098395901	84-08-30	--	--	--	--	--	--	--	--	--	--
423042098503601	84-08-15	--	--	--	--	--	--	--	<.10	<.1	<.10
	84-08-29	--	--	--	--	--	--	--	--	--	--
423510098250501	84-08-30	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	PROME-TONE TOTAL (UG/L) (39056)	PROME-TRYNE TOTAL (UG/L) (39057)	ATRA-ZINE, TOTAL (UG/L) (39630)	CYAN-AZINE TOTAL (UG/L) (81757)	AME-TRYNE TOTAL (82184)
			HALL			
405340098213201	84-03-29	--	--	--	--	--
405311098220601	84-03-29	<.1	<.1	.20	<.10	<.10
405716098271701	84-08-04	--	--	--	--	--
405608098271401	84-08-30	--	--	--	--	--
405604098264601	84-08-30	--	--	--	--	--
405639098250101	84-08-30	--	--	--	--	--
405625098252401	84-08-30	--	--	--	--	--
405612098260601	84-08-30	--	--	--	--	--
405608098245701	84-08-04	--	--	--	--	--
405531098255701	84-08-03	<.1	<.1	.10	<.10	<.10
405530098255702	84-08-03	--	--	--	--	--
405547098270601	84-08-30	--	--	--	--	--
405408098262801	84-08-03	--	--	--	--	--
405436098245801	84-08-03	<.1	<.1	.70	<.10	<.10
405400098244601	84-08-04	--	--	--	--	--
410108098244801	84-08-03	--	--	--	--	--
410006098234801	84-08-04	--	--	--	--	--
410005098365102	84-08-03	--	--	--	--	--
			HAYES			
402329101020501	84-08-08	--	--	--	--	--
402758100505801	84-08-08	<.1	<.1	<.10	<.10	<.10
402728101105501	84-08-08	<.1	<.1	<.10	<.10	<.10
402701101175201	84-08-08	--	--	--	--	--
403329101055501	84-08-08	--	--	--	--	--
403802101041101	84-08-08	<.1	<.1	<.10	<.10	<.10
403744101173601	84-08-08	<.1	<.1	<.10	<.10	<.10
			HOLT			
421157098482501	84-08-16	<.1	<.1	<.10	<.10	<.10
422039098360201	84-08-13	--	--	--	--	--
422524098222101	84-08-30	--	--	--	--	--
422216099030101	84-08-15	--	--	--	--	--
422925098244201	84-08-30	--	--	--	--	--
422858098255201	84-08-14	<.1	<.1	.10	<.10	<.10
422723098290101	84-08-30	--	--	--	--	--
422944098360801	84-08-30	--	--	--	--	--
422931098371801	84-08-14	<.1	<.1	<.10	<.10	<.10
422917098405101	84-08-29	--	--	--	--	--
422848098423101	84-08-14	<.1	<.1	<.10	<.10	<.10
422625098395901	84-08-30	--	--	--	--	--
423042098503601	84-08-15	<.1	<.1	<.10	<.10	<.10
	84-08-29	--	--	--	--	--
423510098250501	84-08-30	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	GEO-LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE-CIFIC CON-DUC-TANCE (UMHOS) (00095)
			HOLT						
423352098412601	30N 12W23BA 1	42 33 52	098 41 26	01	112SDGV	84-08-14	1630	85.00	470
423303098405501	30N 12W264BB 1	42 33 03	098 40 55	01	1210GLL	84-08-14	1400	247	245
423404098471401	30N 13W13CC 1	42 34 04	098 47 14	01	110QRNR	84-08-29	1405	80.00	345
423437099000401	30N 14W18B 1	42 34 37	099 00 04	01	112SDGV	84-08-15	1230	104	--
423352098545402	30N 14W23AA 2	42 33 52	098 54 54	02	112SDGV	84-08-30	1810	68.00	368
423214098540701	30N 14W25CDD 1	42 32 14	098 54 07	01	112SDGV	84-08-15	1430	100	--
424101098333601	31N 11W 20DC 1	42 41 01	098 33 36	01	1210GLL	84-08-14	1200	80.00	390
423801098412601	31N 12W26BC 1	42 38 01	098 41 26	01	1210GLL	84-08-29	1315	150	246
423722098460501	31N 12W31BA 1	42 37 22	098 46 05	01	110WDBS	84-08-29	1230	85.00	--
424011098515401	31N 13W 8CC 1	42 40 11	098 51 54	01	112SDGV	84-08-15	1030	156	328
						84-08-29	1145	156	408
423921098555301	31N 14W15DDB 1	42 39 21	098 55 53	01	112SDGV	84-08-15	1100	103	--
423954098580701	31N 14W16BB 1	42 39 54	098 58 07	01	112SDGV	84-08-29	1110	132	362
423437098000401	30N-14W-18BC	42 34 37	098 00 04	01	112SDGV	84-08-29	0955	--	372
			KEARNEY						
402615098592901	5N 15W 3AAA	40 26 15	098 59 29	01	112SDGV	84-09-06	1430	239	655
402758099094001	6N 16W30AAA	40 27 58	099 09 40	01	112SDGV	84-09-06	1600	200	1050
403747098521401	8N 14W26CC	40 37 47	098 52 14	01	112SDGV	84-09-06	1100	110	173
			KEYA PAHA						
425050099494101	33N 21W 7AD 1	42 50 50	099 49 41	01	1210GLL	84-08-30	1530	80.00	165
			KNOX						
422702098160301	29N 9W32AAA 1	42 27 02	098 16 03	01	1210GLL	84-08-30	1230	--	448
			MADISON						
414518097313401	21N 2W34AA 1	41 45 18	097 31 34	01	112SDGV	84-08-06	1020	108	--
414901097395801	21N 3W 4DCCA1	41 49 01	097 39 58	01	112SDGV	84-08-06	1225	160	560
415125097285702	22N 1W30BB 2	41 51 25	097 28 57	02	112SDGV	84-08-06	1300	166	568
420010097314501	23N 2W 3ABAA1	42 00 10	097 31 45	01	112SDGV	84-08-06	1450	73.00	280
420205097322601	24N 2W22CC 1	42 02 05	097 32 26	01	111ALVM	84-08-06	1320	40.00	685
420046097442201	24N 4W35AD 1	42 00 46	097 44 22	01	112SDGV	84-08-06	1545	105	416
			PHELPS						
402858099233701	6N 18W17CCD	40 28 58	099 23 37	01	112SDGV	84-09-07	0800	150	932
403051099323601	6N 20W 1CD	40 30 51	099 32 36	01	1210GLL	84-09-07	0930	396	565
403420099160701	7N 17W17CDB	40 34 20	099 16 07	01	112SDGV	84-09-06	1900	104	820
403858099152001	8N 17W21CB	40 38 58	099 15 20	01	112SDGV	84-09-06	1730	48.00	515
			PLATTE						
413230097221001	18N 1W12DC 1	41 32 30	097 22 10	01	112SDGV	84-08-06	0940	120	695
414005097312401	20N 2W34AAD 1	41 40 05	097 31 24	01	--	84-08-06	1040	--	1150
			STANTON						
415735097190201	23N 1E21ABAB1	41 57 35	097 19 02	01	--	84-08-07	1150	--	559
415928097024501	23N 3E 20C 1	41 59 28	097 02 45	01	111ALVM	84-08-07	1345	30.00	373
			THURSTON						
420604096412201	25N 6E26DAD 1	42 06 04	096 41 22	01	112SDGV	84-08-07	1805	--	658
			WASHINGTON						
413315096211601	18N 9E 1DC 1	41 33 15	096 21 16	01	110SDGV	84-08-09	1140	70.00	890
			WHEELER						
414751098233901	21N 9W18AADD1	41 47 51	098 23 39	01	112SDGV	84-08-13	1150	335	--
415326098323901	22N 11W12CD 1	41 53 26	098 32 39	01	112SDGV	84-08-13	1400	225	--
415839098442001	23N 12W 8CD 1	41 58 39	098 44 20	01	112SDGV	84-08-16	1530	178	250
420419098195301	24N 9W11BD 1	42 04 19	098 19 53	01	1210GLL	84-08-13	1625	225	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS NONCARBONATE (MG/L AS CACO3) (95902)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)
HOLT											
423352098412601	84-08-14	7.3	11.0	170	103	51	11	11	.4	6.0	70
423303098405501	84-08-14	7.2	12.0	91	5	32	2.6	7.1	.3	4.1	86
423404098471401	84-08-29	8.5	13.0	140	55	48	5.2	8.5	.3	5.1	87
423437099000401	84-08-15	--	11.0	140	83	47	6.7	11	.4	4.8	62
423352098545402	84-08-30	7.7	16.0	140	78	47	6.5	13	.5	6.7	66
423214098540701	84-08-15	--	12.0	130	48	44	5.2	13	.5	5.2	84
424101098333601	84-08-14	--	15.0	160	79	50	8.0	6.7	.2	4.2	79
423801098412601	84-08-29	8.5	14.0	110	0	39	4.0	5.4	.2	4.5	114
423722098460501	84-08-29	8.4	18.0	140	0	45	5.9	7.4	.3	5.2	140
424011098515401	84-08-15	--	11.0	120	71	38	6.4	8.6	.4	5.2	50
	84-08-29	7.5	12.0	160	128	50	8.7	9.4	.3	4.8	33
423921098555301	84-08-15	--	11.5	190	144	60	9.4	9.4	.3	5.9	45
423954098580701	84-08-29	7.9	12.0	150	86	47	6.8	9.1	.3	4.9	60
423437098000401	84-08-29	7.2	12.0	140	79	46	6.6	11	.4	5.4	63
KEARNEY											
402615098592901	84-09-06	7.1	13.0	280	45	92	13	26	.7	14	239
402758099094001	84-09-06	6.9	13.5	470	231	150	22	47	1	18	235
403747098521401	84-09-06	--	13.0	63	27	21	2.6	3.8	.2	2.9	36
KEYA PAHA											
425050099494101	84-08-30	8.2	16.0	59	2	19	2.8	4.5	.3	5.6	57
KNOX											
422702098160301	84-08-30	8.3	13.0	170	0	54	8.9	20	.7	5.8	185
MADISON											
414518097313401	84-08-06	7.1	13.5	340	57	100	21	23	.6	8.3	280
414901097395801	84-08-06	7.3	15.0	270	0	88	13	8.6	.2	3.9	289
415125097285702	84-08-06	7.2	13.5	280	0	89	15	10	.3	6.4	297
420010097314501	84-08-06	7.4	13.5	130	3	41	6.3	8.9	.4	4.1	126
420205097322601	84-08-06	7.5	12.5	320	0	92	22	22	.6	11	325
420046097442201	84-08-06	7.5	16.0	190	0	59	10	7.9	.3	7.2	213
PHELPS											
402858099233701	84-09-07	7.2	14.0	360	159	120	15	41	1	20	203
403051099323601	84-09-07	7.3	14.0	270	18	83	15	11	.3	10	251
403420099160701	84-09-06	7.1	12.5	320	53	100	16	52	1	16	263
403858099152001	84-09-06	7.4	13.0	230	63	75	10	11	.3	5.6	166
PLATTE											
413230097221001	84-08-06	6.9	17.0	340	43	110	17	18	.4	6.0	302
414005097312401	84-08-06	7.5	--	490	200	130	41	68	1	10	294
STANTON											
415735097190201	84-08-07	7.0	15.5	260	69	74	18	17	.5	8.6	190
415928097024501	84-08-07	8.2	16.0	170	0	50	10	7.6	.3	5.7	175
THURSTON											
420604096412201	84-08-07	7.4	11.0	320	4	92	22	19	.5	3.8	317
WASHINGTON											
413315096211601	84-08-09	7.2	13.0	400	19	110	31	46	1	5.9	384
WHEELER											
414751098233901	84-08-13	6.8	13.0	160	0	50	8.1	5.8	.2	6.8	183
415326098323901	84-08-13	6.6	12.0	89	0	28	4.6	7.1	.3	4.9	96
415839098442001	84-08-16	--	12.0	96	29	27	4.5	7.3	.4	4.0	57
420419098195301	84-08-13	7.4	12.0	82	0	27	3.6	6.1	.3	4.9	94

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN DIS-SOLVED (MG/L AS N) (00602)
HOLT											
423352098412601	84-08-14	15	11	.10	29	180	.24	--	31	--	--
423303098405501	84-08-14	6.1	1.2	.20	56	160	.22	--	4.5	--	--
423404098471401	84-08-29	10	6.5	.20	56	190	.26	--	15	--	--
423437099000401	84-08-15	18	11	.20	41	180	.24	--	21	--	--
423352098545402	84-08-30	22	11	.30	41	190	.25	--	19	--	--
423214098540701	84-08-15	25	8.0	.20	49	200	.27	--	11	--	--
424101098333601	84-08-14	24	5.9	.30	29	180	.24	--	17	--	--
423801098412601	84-08-29	2.4	.80	.20	57	180	.25	--	.81	--	--
423722098460501	84-08-29	3.6	1.1	.30	58	210	.29	--	1.9	--	--
424011098515401	84-08-15	14	7.0	.20	39	150	.20	--	20	--	--
	84-08-29	18	9.8	.10	33	150	.21	--	30	--	--
423921098555301	84-08-15	20	13	.20	34	180	.24	--	39	--	--
423954098580701	84-08-29	11	7.0	.20	43	170	.22	--	23	--	--
423437098000401	84-08-29	15	10	.20	40	170	.23	--	21	--	--
KEARNEY											
402615098592901	84-09-06	120	15	.40	29	450	.62	--	.25	--	--
402758099094001	84-09-06	280	32	.30	35	730	.99	--	11	--	--
403747098521401	84-09-06	9.2	2.2	.20	34	97	.13	--	7.1	--	--
KEYA PAHA											
425050099494101	84-08-30	3.4	.80	.30	65	140	.18	--	3.0	--	--
KNOX											
422702098160301	84-08-30	12	2.7	.40	54	270	.37	--	8.7	--	--
MADISON											
414518097313401	84-08-06	80	3.8	.40	34	440	.60	--	<.10	--	--
414901097395801	84-08-06	12	4.0	.20	49	350	.48	--	1.0	--	--
415125097285702	84-08-06	17	2.8	.30	41	360	.49	--	1.2	--	--
420010097314501	84-08-06	18	1.6	.30	39	200	.26	--	<.10	--	--
420205097322601	84-08-06	52	4.2	.40	36	440	.59	--	<.10	--	--
420046097442201	84-08-06	12	1.9	.30	39	270	.36	--	1.1	--	--
PHELPS											
402858099233701	84-09-07	200	32	.30	36	590	.80	--	14	--	--
403051099323601	84-09-07	42	6.2	.20	62	380	.52	--	3.2	--	--
403420099160701	84-09-06	160	17	.50	29	550	.75	--	3.5	--	--
403858099152001	84-09-06	62	11	.30	36	310	.42	--	8.9	--	--
PLATTE											
413230097221001	84-08-06	54	10	.30	46	440	.60	--	5.3	--	--
414005097312401	84-08-06	290	6.2	.40	33	760	1.0	--	<.10	--	--
STANTON											
415735097190201	84-08-07	87	12	.40	30	360	.49	--	2.5	--	--
415928097024501	84-08-07	18	2.8	.30	19	220	.30	--	<.10	--	--
THURSTON											
420604096412201	84-08-07	38	1.9	.30	26	400	.53	--	<.10	--	--
WASHINGTON											
413315096211601	84-08-09	120	7.1	.60	13	570	.77	--	<.10	--	--
WHEELER											
414751098233901	84-08-13	4.2	.90	.30	38	230	.31	--	.24	--	--
415326098323901	84-08-13	2.7	.70	.20	45	150	.21	--	1.7	--	--
415839098442001	84-08-16	8.1	4.0	.10	41	130	.18	--	11	--	--
420419098195301	84-08-13	4.8	.70	.30	56	160	.22	--	.88	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90) (80050)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L) (80020)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
					HOLT						
423352098412601	84-08-14	.20	--	--	--	--	--	--	--	--	--
423303098405501	84-08-14	.50	--	--	--	--	--	--	--	--	--
423404098471401	84-08-29	--	<10	5	4	--	--	--	--	--	--
423437099000401	84-08-15	.40	--	--	--	--	--	--	--	--	--
423352098545402	84-08-30	--	30	23	<1	--	--	--	--	--	--
423214098540701	84-08-15	.30	--	--	--	--	--	--	--	--	--
424101098333601	84-08-14	.60	--	--	--	--	--	--	--	--	--
423801098412601	84-08-29	--	10	4	6	--	--	--	--	--	--
423722098460501	84-08-29	--	20	<3	7	--	--	--	--	--	--
424011098515401	84-08-15	.40	--	--	--	--	--	--	--	--	--
	84-08-29	--	20	<3	190	--	--	--	--	--	--
423921098555301	84-08-15	.40	--	--	--	--	--	--	--	--	--
423954098580701	84-08-29	--	20	<3	6	--	--	--	--	--	--
423437098000401	84-08-29	--	30	5	<1	--	--	--	--	--	--
					KEARNEY						
402615098592901	84-09-06	<.20	--	--	--	--	--	--	--	--	--
402758099094001	84-09-06	<.20	--	--	--	--	--	--	--	--	--
403747098521401	84-09-06	<.20	--	--	--	--	--	--	--	--	--
					KEYA PAHA						
425050099494101	84-08-30	--	20	<3	<1	--	--	--	--	--	--
					KNOX						
422702098160301	84-08-30	--	50	6	3	--	--	--	--	--	--
					MADISON						
414518097313401	84-08-06	--	120	890	150	--	--	--	--	--	--
414901097395801	84-08-06	--	40	<3	2	--	--	--	--	--	--
415125097285702	84-08-06	--	50	<3	<1	--	--	--	--	--	--
420010097314501	84-08-06	--	20	1300	380	--	--	--	--	--	--
420205097322601	84-08-06	--	70	370	200	--	--	--	--	--	--
420046097442201	84-08-06	--	30	3	10	--	--	--	--	--	--
					PHELPS						
402858099233701	84-09-07	<.20	--	--	--	--	--	--	--	--	--
403051099323601	84-09-07	.40	--	--	--	--	--	--	--	--	--
403420099160701	84-09-06	<.20	--	--	--	--	--	--	--	--	--
403858099152001	84-09-06	.30	--	--	--	--	--	--	--	--	--
					PLATTE						
413230097221001	84-08-06	--	60	6	2	--	--	--	--	--	--
414005097312401	84-08-06	--	440	590	200	--	--	--	--	--	--
					STANTON						
415735097190201	84-08-07	--	80	290	710	--	--	--	--	--	--
415928097024501	84-08-07	--	40	60	82	--	--	--	--	--	--
					THURSTON						
420604096412201	84-08-07	--	70	2500	720	--	--	--	--	--	--
					WASHINGTON						
413315096211601	84-08-09	--	150	1100	230	--	--	--	--	--	--
					WHEELER						
414751098233901	84-08-13	<.20	--	--	--	--	--	--	--	--	--
415326098323901	84-08-13	.40	--	--	--	--	--	--	--	--	--
415839098442001	84-08-16	.40	--	--	--	--	--	--	--	--	--
420419098195301	84-08-13	.20	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	DI-CHLCRO-BRCMO-METHANE TOTAL (UG/L) (32101)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L) (32102)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L) (32103)	BROM-OFORM TOTAL (UG/L) (32104)	CHLORO-DI-BRCMO-METHANE TOTAL (UG/L) (32105)	CHLORO-FORM TOTAL (UG/L) (32106)	TCLUENE TCTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLCRO-BENZENE TOTAL (UG/L) (34301)	CHLORO-ETHANE TOTAL (UG/L) (34311)
HOLT											
423352098412601	84-08-14	--	--	--	--	--	--	--	--	--	--
423303098405501	84-08-14	--	--	--	--	--	--	--	--	--	--
423404098471401	84-08-29	--	--	--	--	--	--	--	--	--	--
423437099000401	84-08-15	--	--	--	--	--	--	--	--	--	--
423352098545402	84-08-30	--	--	--	--	--	--	--	--	--	--
423214098540701	84-08-15	--	--	--	--	--	--	--	--	--	--
424101098333601	84-08-14	--	--	--	--	--	--	--	--	--	--
423801098412601	84-08-29	--	--	--	--	--	--	--	--	--	--
423722098460501	84-08-29	--	--	--	--	--	--	--	--	--	--
424011098515401	84-08-15	--	--	--	--	--	--	--	--	--	--
	84-08-29	--	--	--	--	--	--	--	--	--	--
423921098555301	84-08-15	--	--	--	--	--	--	--	--	--	--
423954098580701	84-08-29	--	--	--	--	--	--	--	--	--	--
423437098000401	84-08-29	--	--	--	--	--	--	--	--	--	--
KEARNEY											
402615098592901	84-09-06	--	--	--	--	--	--	--	--	--	--
402758099094001	84-09-06	--	--	--	--	--	--	--	--	--	--
403747098521401	84-09-06	--	--	--	--	--	--	--	--	--	--
KEYA PAHA											
425050099494101	84-08-30	--	--	--	--	--	--	--	--	--	--
KNOX											
422702098160301	84-08-30	--	--	--	--	--	--	--	--	--	--
MADISON											
414518097313401	84-08-06	--	--	--	--	--	--	--	--	--	--
414901097395801	84-08-06	--	--	--	--	--	--	--	--	--	--
415125097285702	84-08-06	--	--	--	--	--	--	--	--	--	--
420010097314501	84-08-06	--	--	--	--	--	--	--	--	--	--
420205097322601	84-08-06	--	--	--	--	--	--	--	--	--	--
420046097442201	84-08-06	--	--	--	--	--	--	--	--	--	--
PHELPS											
402858099233701	84-09-07	--	--	--	--	--	--	--	--	--	--
403051099323601	84-09-07	--	--	--	--	--	--	--	--	--	--
403420099160701	84-09-06	--	--	--	--	--	--	--	--	--	--
403858099152001	84-09-06	--	--	--	--	--	--	--	--	--	--
PLATTE											
413230097221001	84-08-06	--	--	--	--	--	--	--	--	--	--
414005097312401	84-08-06	--	--	--	--	--	--	--	--	--	--
STANTON											
415735097190201	84-08-07	--	--	--	--	--	--	--	--	--	--
415928097024501	84-08-07	--	--	--	--	--	--	--	--	--	--
THURSTON											
420604096412201	84-08-07	--	--	--	--	--	--	--	--	--	--
WASHINGTON											
413315096211601	84-08-09	--	--	--	--	--	--	--	--	--	--
WHEELER											
414751098233901	84-08-13	--	--	--	--	--	--	--	--	--	--
415326098323901	84-08-13	--	--	--	--	--	--	--	--	--	--
415839098442001	84-08-16	--	--	--	--	--	--	--	--	--	--
420619098195301	84-08-13	--	--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	ETHYL-BENZENE TOTAL (UG/L) (34371)	METHYL-BROMIDE TOTAL (UG/L) (34413)	METHYL-ENE CHLO-RIDE TOTAL (UG/L) (34423)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L) (34475)	TRI-CHLORO-FLOURO-METHANE TOTAL (UG/L) (34488)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L) (34501)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L) (34506)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L) (34511)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L) (34516)
					HOLT						
423352098412601	84-08-14	--	--	--	--	--	--	--	--	--	--
423303098405501	84-08-14	--	--	--	--	--	--	--	--	--	--
423404098471401	84-08-29	--	--	--	--	--	--	--	--	--	--
423437099000401	84-08-15	--	--	--	--	--	--	--	--	--	--
423352098545402	84-08-30	--	--	--	--	--	--	--	--	--	--
423214098540701	84-08-15	--	--	--	--	--	--	--	--	--	--
424101098333601	84-08-14	--	--	--	--	--	--	--	--	--	--
423801098412601	84-08-29	--	--	--	--	--	--	--	--	--	--
423722099460501	84-08-29	--	--	--	--	--	--	--	--	--	--
424011098515401	84-08-15	--	--	--	--	--	--	--	--	--	--
	84-08-29	--	--	--	--	--	--	--	--	--	--
423921098555301	84-08-15	--	--	--	--	--	--	--	--	--	--
423954098580701	84-08-29	--	--	--	--	--	--	--	--	--	--
423437098000401	84-08-29	--	--	--	--	--	--	--	--	--	--
					KEARNEY						
402615098592901	84-09-06	--	--	--	--	--	--	--	--	--	--
402758099094001	84-09-06	--	--	--	--	--	--	--	--	--	--
403747098521401	84-09-06	--	--	--	--	--	--	--	--	--	--
					KEYA PAHA						
425050099494101	84-08-30	--	--	--	--	--	--	--	--	--	--
					KNOX						
422702098160301	84-08-30	--	--	--	--	--	--	--	--	--	--
					MADISON						
414518097313401	84-08-06	--	--	--	--	--	--	--	--	--	--
414901097395801	84-08-06	--	--	--	--	--	--	--	--	--	--
415125097285702	84-08-06	--	--	--	--	--	--	--	--	--	--
420010097314501	84-08-06	--	--	--	--	--	--	--	--	--	--
420205097322601	84-08-06	--	--	--	--	--	--	--	--	--	--
420046097442201	84-08-06	--	--	--	--	--	--	--	--	--	--
					PHELPS						
402858099233701	84-09-07	--	--	--	--	--	--	--	--	--	--
403051099323601	84-09-07	--	--	--	--	--	--	--	--	--	--
403420099160701	84-09-06	--	--	--	--	--	--	--	--	--	--
403858099152001	84-09-06	--	--	--	--	--	--	--	--	--	--
					PLATTE						
413230097221001	84-08-06	--	--	--	--	--	--	--	--	--	--
414005097312401	84-08-06	--	--	--	--	--	--	--	--	--	--
					STANTON						
415735097190201	84-08-07	--	--	--	--	--	--	--	--	--	--
415928097024501	84-08-07	--	--	--	--	--	--	--	--	--	--
					THURSTON						
420604096412201	84-08-07	--	--	--	--	--	--	--	--	--	--
					WASHINGTON						
413315096211601	84-08-09	--	--	--	--	--	--	--	--	--	--
					WHEELER						
414751098233901	84-08-13	--	--	--	--	--	--	--	--	--	--
415326098323901	84-08-13	--	--	--	--	--	--	--	--	--	--
415839098442001	84-08-16	--	--	--	--	--	--	--	--	--	--
420419098195301	84-08-13	--	--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	1,2-DI-CHLCRO-PROPANE TOTAL (UG/L) (34541)	1,2-TRANSDI CHLORO-ETHYL-ENE TOTAL (UG/L) (34546)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34561)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L) (34576)	DI-CHLCRO-DI-FLUCRO-METHANE TOTAL (UG/L) (34668)	VINYL CHLO-RIDE TOTAL (UG/L) (39175)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L) (39180)	PRO-PAZINE TOTAL (UG/L) (39024)	SIME-TRYNE TOTAL (UG/L) (39C54)	SIMA-ZINE TOTAL (UG/L) (39055)
					HOLT						
423352098412601	84-08-14	--	--	--	--	--	--	--	.10	.1	.10
423303098405501	84-08-14	--	--	--	--	--	--	--	<.10	<.1	<.10
423404098471401	84-08-29	--	--	--	--	--	--	--	--	--	--
423437099000401	84-08-15	--	--	--	--	--	--	--	<.10	<.1	<.10
423352098545402	84-08-30	--	--	--	--	--	--	--	--	--	--
423214098540701	84-08-15	--	--	--	--	--	--	--	--	--	--
424101098333601	84-08-14	--	--	--	--	--	--	--	--	--	--
423801098412601	84-08-29	--	--	--	--	--	--	--	--	--	--
423722098460501	84-08-29	--	--	--	--	--	--	--	--	--	--
424011098515401	84-08-15	--	--	--	--	--	--	--	--	--	--
	84-08-29	--	--	--	--	--	--	--	--	--	--
423921098555301	84-08-15	--	--	--	--	--	--	--	--	--	--
423954098580701	84-08-29	--	--	--	--	--	--	--	--	--	--
423437098000401	84-08-29	--	--	--	--	--	--	--	--	--	--
					KEARNEY						
402615098592901	84-09-06	--	--	--	--	--	--	--	<.10	<.1	<.10
402758099094001	84-09-06	--	--	--	--	--	--	--	<.10	<.1	<.10
403747098521401	84-09-06	--	--	--	--	--	--	--	<.10	<.1	<.10
					KEYA PAHA						
425050099494101	84-08-30	--	--	--	--	--	--	--	--	--	--
					KNOX						
422702098160301	84-08-30	--	--	--	--	--	--	--	--	--	--
					MADISON						
414518097313401	84-08-06	--	--	--	--	--	--	--	--	--	--
414901097395801	84-08-06	--	--	--	--	--	--	--	--	--	--
415125097285702	84-08-06	--	--	--	--	--	--	--	--	--	--
420010097314501	84-08-06	--	--	--	--	--	--	--	--	--	--
420205097322601	84-08-06	--	--	--	--	--	--	--	--	--	--
420046097442201	84-08-06	--	--	--	--	--	--	--	--	--	--
					PHELPS						
402858099233701	84-09-07	--	--	--	--	--	--	--	<.10	<.1	<.10
403051099323601	84-09-07	--	--	--	--	--	--	--	<.10	<.1	<.10
403420099160701	84-09-06	--	--	--	--	--	--	--	<.10	<.1	<.10
403858099152001	84-09-06	--	--	--	--	--	--	--	<.10	<.1	<.10
					PLATTE						
413230097221001	84-08-06	--	--	--	--	--	--	--	--	--	--
414005097312401	84-08-06	--	--	--	--	--	--	--	--	--	--
					STANTON						
415735097190201	84-08-07	--	--	--	--	--	--	--	--	--	--
415928097024501	84-08-07	--	--	--	--	--	--	--	--	--	--
					THURSTON						
420604096412201	84-08-07	--	--	--	--	--	--	--	--	--	--
					WASHINGTON						
413315096211601	84-08-09	--	--	--	--	--	--	--	--	--	--
					WHEELER						
414751098233901	84-08-13	--	--	--	--	--	--	--	--	--	--
415326098323901	84-08-13	--	--	--	--	--	--	--	--	--	--
415839098442001	84-08-16	--	--	--	--	--	--	--	<.10	<.1	<.10
420419098195301	84-08-13	--	--	--	--	--	--	--	<.10	<.1	<.10

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	PROMETONE TOTAL (UG/L) (39056)	PROMETRYNE TOTAL (UG/L) (39057)	ATRAZINE, TOTAL (UG/L) (39630)	CYANAZINE TOTAL (UG/L) (81757)	AMETRYNE TOTAL (82184)
		HOLT				
423352098412601	84-08-14	.1	.1	.90	.10	.10
423303098405501	84-08-14	<.1	<.1	<.10	<.10	<.10
423404098471401	84-08-29	--	--	--	--	--
423437099000401	84-08-15	<.1	<.1	.10	<.10	<.10
423352098545402	84-08-30	--	--	--	--	--
423214098540701	84-08-15	--	--	--	--	--
424101098333601	84-08-14	--	--	--	--	--
423801098412601	84-08-29	--	--	--	--	--
423722098460501	84-08-29	--	--	--	--	--
424011098515401	84-08-15	--	--	--	--	--
	84-08-29	--	--	--	--	--
423921098555301	84-08-15	--	--	--	--	--
423954098580701	84-08-29	--	--	--	--	--
423437098000401	84-08-29	--	--	--	--	--
		KEARNEY				
402615098592901	84-09-06	<.1	<.1	<.10	<.10	<.10
402758099094001	84-09-06	<.1	<.1	<.10	<.10	<.10
403747098521401	84-09-06	<.1	<.1	.10	<.10	<.10
		KEYA PAHA				
425050099494101	84-08-30	--	--	--	--	--
		KNOX				
422702098160301	84-08-30	--	--	--	--	--
		MADISON				
414518097313401	84-08-06	--	--	--	--	--
414901097395801	84-08-06	--	--	--	--	--
415125097285702	84-08-06	--	--	--	--	--
420010097314501	84-08-06	--	--	--	--	--
420205097322601	84-08-06	--	--	--	--	--
420046097442201	84-08-06	--	--	--	--	--
		PHELPS				
402858099233701	84-09-07	<.1	<.1	<.10	<.10	<.10
403051099323601	84-09-07	<.1	<.1	<.10	<.10	<.10
403420099160701	84-09-06	<.1	<.1	<.10	<.10	<.10
403858099152001	84-09-06	<.1	<.1	.30	<.10	<.10
		PLATTE				
413230097221001	84-08-06	--	--	--	--	--
414005097312401	84-08-06	--	--	--	--	--
		STANTON				
415735097190201	84-08-07	--	--	--	--	--
415928097024501	84-08-07	--	--	--	--	--
		THURSTON				
420604096412201	84-08-07	--	--	--	--	--
		WASHINGTON				
413315096211601	84-08-09	--	--	--	--	--
		WHEELER				
414731098233901	84-08-13	--	--	--	--	--
415326098323901	84-08-13	--	--	--	--	--
415839098442001	84-08-16	<.1	<.1	<.10	<.10	<.10
420419098195301	84-08-13	<.1	<.1	<.10	<.10	<.10

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

YORK

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	GEO-LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE-CIFIC CON-DUC-TANCE (UMHOS) (00095)
404354097265601	9N 1W20DD 1	40 43 54	097 26 56	01	112SDGV	84-08-01	0930	280	642
404342097474501	9N 4W20DCC 1	40 43 42	097 47 45	01	112SDGV	84-08-01	1130	90.00	635
405108097285901	10N 2W12ACA 1	40 51 08	097 28 59	01	112SDGV	84-07-31	1300	59.00	867
404854097323701	10N 3W21DCD 1	40 48 54	097 32 37	01	112SDGV	84-08-01	1030	149	503
405706097282301	11N 1W 6BDDD1	40 57 06	097 28 23	01	112SDGV	84-07-31	1345	265	645
405407097403901	11N 3W20DDCC1	40 54 07	097 40 39	01	112SDGV	84-07-31	1030	92.00	600
405552097434201	11N 4W12CC 1	40 55 52	097 43 42	01	112SDGV	84-08-01	1330	160	645
410137097241302	12N 1W11BC 2	41 01 37	097 24 13	02	112SDGV	84-07-31	1500	156	605
410100097393001	12N 3W16AABA1	41 01 00	097 39 30	01	112SDGV	84-07-31	1130	148	610
410207097491501	12N 4W 6CDB 1	41 02 07	097 49 15	01	112SDGV	84-06-01	1430	182	540

YORK

STATION NUMBER	DATE OF SAMPLE	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)
404354097265601	84-08-01	6.5	14.0	270	67	85	14	27	.7	5.4	203
404342097474501	84-08-01	6.4	14.5	250	47	78	13	30	.9	5.8	202
405108097285901	84-07-31	6.4	13.0	280	93	75	23	63	2	12	189
404854097323701	84-08-01	6.6	12.0	210	5	67	10	21	.7	5.4	204
405706097282301	84-07-31	6.7	12.0	260	0	82	14	32	.9	6.5	269
405407097403901	84-07-31	7.0	13.0	210	0	64	13	37	1	6.7	253
405552097434201	84-08-01	6.8	13.5	290	0	93	15	34	.9	6.4	295
410137097241302	84-07-31	6.9	13.0	260	0	83	12	25	.7	5.4	270
410100097393001	84-07-31	6.7	12.5	250	0	82	12	22	.6	5.5	271
410207097491501	84-08-01	6.7	12.0	240	8	75	12	19	.6	6.8	229

YORK

STATION NUMBER	DATE OF SAMPLE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN DIS-SOLVED (MG/L AS N) (00602)
404354097265601	84-08-01	110	16	.30	30	410	.56	--	4.1	--	--
404342097474501	84-08-01	75	21	.30	33	380	.51	--	6.0	--	--
405108097285901	84-07-31	70	50	.20	45	450	.61	--	28	--	--
404854097323701	84-08-01	22	14	.30	39	300	.41	--	5.3	--	--
405706097282301	84-07-31	32	14	.30	37	380	.52	--	10	--	--
405407097403901	84-07-31	31	14	.40	35	350	.48	--	5.2	--	--
405552097434201	84-08-01	33	14	.40	35	410	.55	--	7.5	--	--
410137097241302	84-07-31	20	16	.30	40	360	.49	--	4.6	--	--
410100097393001	84-07-31	31	4.9	.30	36	360	.48	--	2.2	--	--
410207097491501	84-08-01	39	9.1	.30	38	340	.46	--	4.2	--	--

STATION NUMBER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	BORON, DISSOLVED (UG/L AS B) (01020)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT) (80030)	GROSS BETA, DISSOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90) (80050)	URANIUM DISSOLVED, EXTRACTION (UG/L) (80020)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DISSOLVED (UG/L AS U) (22703)
					YORK						
404354097265601	84-08-01	.20	--	--	--	--	--	--	--	--	--
404342097474501	84-08-01	.80	--	--	--	--	--	--	--	--	--
405108097285901	84-07-31	.50	--	--	--	--	--	--	--	--	--
404854097323701	84-08-01	.70	--	--	--	--	--	--	--	--	--
405706097282301	84-07-31	.30	--	--	--	--	--	--	--	--	--
405407097403901	84-07-31	.40	--	--	--	--	--	--	--	--	--
405552097434201	84-08-01	.30	--	--	--	--	--	--	--	--	--
410137097241302	84-07-31	.40	--	--	--	--	--	--	--	--	--
410100097393001	84-07-31	.30	--	--	--	--	--	--	--	--	--
410207097491501	84-08-01	.40	--	--	--	--	--	--	--	--	--

STATION NUMBER	DATE OF SAMPLE	DICHLOROBROMOMETHANE TOTAL (UG/L) (32101)	CARBONTETRACHLORIDE TOTAL (UG/L) (32102)	1,2-DICHLOROETHANE TOTAL (UG/L) (32103)	BROMOFORM TOTAL (UG/L) (32104)	CHLORODIBROMOMETHANE TOTAL (UG/L) (32105)	CHLOROFORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLOROBENZENE TOTAL (UG/L) (34301)	CHLOROETHANE TOTAL (UG/L) (34311)
					YORK						
404354097265601	84-08-01	--	--	--	--	--	--	--	--	--	--
404342097474501	84-08-01	--	--	--	--	--	--	--	--	--	--
405108097285901	84-07-31	--	--	--	--	--	--	--	--	--	--
404854097323701	84-08-01	--	--	--	--	--	--	--	--	--	--
405706097282301	84-07-31	--	--	--	--	--	--	--	--	--	--
405407097403901	84-07-31	--	--	--	--	--	--	--	--	--	--
405552097434201	84-08-01	--	--	--	--	--	--	--	--	--	--
410137097241302	84-07-31	--	--	--	--	--	--	--	--	--	--
410100097393001	84-07-31	--	--	--	--	--	--	--	--	--	--
410207097491501	84-08-01	--	--	--	--	--	--	--	--	--	--

STATION NUMBER	DATE OF SAMPLE	ETHYLBENZENE TOTAL (UG/L) (34371)	METHYLBROMIDE TOTAL (UG/L) (34413)	METHYLENE CHLORIDE TOTAL (UG/L) (34423)	TETRACHLOROETHYLENE TOTAL (UG/L) (34475)	TRICHLOROFLOUROMETHANE TOTAL (UG/L) (34488)	1,1-DICHLOROETHANE TOTAL (UG/L) (34496)	1,1-DICHLOROETHYLENE TOTAL (UG/L) (34501)	1,1,1-TRICHLOROETHANE TOTAL (UG/L) (34506)	1,1,2-TRICHLOROETHANE TOTAL (UG/L) (34511)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L) (34516)
					YORK						
404354097265601	84-08-01	--	--	--	--	--	--	--	--	--	--
404342097474501	84-08-01	--	--	--	--	--	--	--	--	--	--
405108097285901	84-07-31	--	--	--	--	--	--	--	--	--	--
404854097323701	84-08-01	--	--	--	--	--	--	--	--	--	--
405706097282301	84-07-31	--	--	--	--	--	--	--	--	--	--
405407097403901	84-07-31	--	--	--	--	--	--	--	--	--	--
405552097434201	84-08-01	--	--	--	--	--	--	--	--	--	--
410137097241302	84-07-31	--	--	--	--	--	--	--	--	--	--
410100097393001	84-07-31	--	--	--	--	--	--	--	--	--	--
410207097491501	84-08-01	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	1,2-DICHLOROPROPANE TOTAL (UG/L) (34541)	1,2-TRANSDICHLOROETHYLENE TOTAL (UG/L) (34546)	1,3-DICHLOROPROPENE TOTAL (UG/L) (34561)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L) (34576)	DICHLORODIFLUOROMETHANE TOTAL (UG/L) (34668)	VINYL CHLORIDE TOTAL (UG/L) (39175)	TRICHLOROETHYLENE TOTAL (UG/L) (39180)	PROPAZINE TOTAL (UG/L) (39024)	SIMETRYNE TOTAL (UG/L) (39054)	SIMAZINE TOTAL (UG/L) (39055)
					YORK						
404354097265601	84-08-01	--	--	--	--	--	--	--	<.10	<.1	<.10
404342097474501	84-08-01	--	--	--	--	--	--	--	--	--	--
405108097285901	84-07-31	--	--	--	--	--	--	--	.10	<.1	<.10
404854097323701	84-08-01	--	--	--	--	--	--	--	<.10	<.1	<.10
405706097282301	84-07-31	--	--	--	--	--	--	--	--	--	--
405407097403901	84-07-31	--	--	--	--	--	--	--	<.10	<.1	<.10
405552097434201	84-08-01	--	--	--	--	--	--	--	--	--	--
410137097241302	84-07-31	--	--	--	--	--	--	--	<.10	<.1	<.10
410100097393001	84-07-31	--	--	--	--	--	--	--	<.10	<.1	<.10
410207097491501	84-08-01	--	--	--	--	--	--	--	--	--	--

STATION NUMBER	DATE OF SAMPLE	PROMETONE TOTAL (UG/L) (39056)	PROMETRYNE TOTAL (UG/L) (39057)	ATRAZINE, TOTAL (UG/L) (39630)	CYANAZINE TOTAL (UG/L) (81757)	AMETRYNE TOTAL (82184)
			YORK			
404354097265601	84-08-01	<.1	<.1	<.10	<.10	<.10
404342097474501	84-08-01	--	--	--	--	--
405108097285901	84-07-31	<.1	<.1	2.2	<.10	<.10
404854097323701	84-08-01	<.1	<.1	<.10	<.10	<.10
405706097282301	84-07-31	--	--	--	--	--
405407097403901	84-07-31	<.1	<.1	<.10	<.10	<.10
405552097434201	84-08-01	--	--	--	--	--
410137097241302	84-07-31	<.1	<.1	.10	.10	.10
410100097393001	84-07-31	<.1	<.1	<.10	<.10	<.10
410207097491501	84-08-01	--	--	--	--	--

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October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons